



Sveriges lantbruksuniversitet
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Collaborative dynamics in a practice of increasing utility cycling

– Understanding prerequisites for collaboration between bicycle planners and mobility managers in a Norwegian municipality

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Credits: 30 HEC

Level: Second cycle (A2E)

Course title: Master thesis in Environmental science, A2E, 30.0 credits

Course code: EX0897

Course coordinating department: Department of Aquatic Sciences and Assessment

Programme/Education: Environmental Communication and Management – Master's Programme

Place of publication: Uppsala

Year of publication: 2019

Online publication: <https://stud.epsilon.slu.se>

Keywords: practice theory, collaborative dynamics, collaborative governance, bicycle planning, mobility management, cycle share, the zero-growth target

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Abstract

This study explores prerequisites for closer collaboration between practitioners who in different ways work to increase the cycle share of all travels in a Norwegian municipality. Attention is given to how practitioners make sense of the practice where they work. Within the practice, the focus is targeted at collaboration. I ask: What is characterising the practice in terms of meanings, materials and competences? What prerequisites for closer collaboration can be identified for the practice to meet the goal of increasing the cycle share of all travels? The analysis draws on practice theory and an integrative framework for collaborative dynamics. The data originate from interviews and observations with practitioners working with bicycle planning or mobility management. The results show that meaning, material and competence characterising the practice, contain prerequisites for closer collaboration in different ways. In relation to collaboration, the practitioners of the practice share meanings of making it easy and safe to cycle, benefits and challenges of closer collaboration. Material aspects related to collaboration concerns shared information and the workspace, which enable the practitioners to be updated on each other's work. In addition, competences to ask and transmit high-quality knowledge characterise the practice in relation to closer collaboration. The study indicates that the practitioners' relationship and shared aspirations are the main prerequisites for closer collaboration. Today, the practice in question contains little collaboration between practitioners with different work tasks, specifically bicycle planners and mobility managers. The study indicates that the practice's capacity for joint action is limited, suggesting that a key management priority should be to enable practitioners, working with physical and social factors, to consider the knowledge they rely on and engage in closer collaboration.

Keywords: practice theory, collaborative dynamics, collaborative governance, bicycle planning, mobility management, cycle share, the zero-growth target

Acknowledgement

I want to express my gratitude to the informants to the study for letting me into your workplace. Without your contribution, this study would not have been possible. I am also grateful to three reviewers for taking your time to improve the study, by giving me valuable feedback. Thank you to my committed supervisor for your motivational support and for contributing with ideas and feedback, while consistently allowing the paper to be my own work.

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Abbreviations

CGR	Collaborative Governance Regime
NTP	National Transport Plan
PT	Practice Theory
TØI	The Institute of Transport Economics

1 Introduction

The main goal in Norway's National cycling strategy, 2014-2023, is to increase the national cycle share of all travels from five to eight percent by 2023. According to a report on cycling in Norway (Strand *et al.*, 2015), presented by the Institute of Transport Economics (TØI), the goal is ambitious, as the percentage has been stable between four and five percent the last ten years. At the same time, the total number of travels increase. In this context, the government has established the zero-growth target. Meaning that all growth in traffic should be taken by collective transport, on foot or on bicycle, and avoid growth in personal car use (Samferdselsdepartementet, 2018). Meeting the target includes a change in people's behaviours, which has proven to be a difficult task. Societal problems like this tend to be complicated and tangled without obvious solutions. Such problems are known as wicked problems (Rittel & Webber, 1973). In a white paper to the Storting (the Norwegian Parliament), the government expresses that many of today's problems are indeed wicked and without obvious solutions that no single discipline can solve on its own. Developing knowledge and skills to meet wicked problems requires an interdisciplinary approach (St. meld. nr. 25 (2016-2017)).

This study is focused on the task of increasing the cycle share of all travels in a Norwegian municipality. There is broad agreement that an increasing cycle share depends on disciplines where people know bicycle infrastructure and how to change behaviour (Duus, 2011; Espeland & Amundsen, 2012; Pucher *et al.*, 2010; Strand *et al.*, 2015). Strand *et al.* (2015) argue that physical and social factors should be dealt with together more than what has been the case in cycling policy and planning so far. Transport strategies should be increasingly and transparently informed by a variety of knowledge that addresses both transport planning and wider societal challenges (Vigar, 2017). Together, the zero-growth target and the demand for an interdisciplinary approach serve as the starting point for the study.

The empirical basis of my study is a workplace in a Norwegian municipality, where public officials from different disciplines work to reach the governmental zero-growth target by increasing the cycle share of all travels. I have chosen to apply social practice theory to understand collaborative work aiming at increasing the cycle share. For this reason, the workplace in the municipality is viewed as a practice. A practice is defined as "a temporally unfolding and spatially dispersed nexus of doings and sayings" (Schatzki, 1996, p. 89). The practice in this study is a practice where practitioners work to increase the cycle share. The public officials or practitioners are the carriers of the practice. The practitioners include those who work with either physical facilitation or mobility management. Physical facilitation refers to facilitated walk and cycle routes, clear signage, bicycle parking by public transport hubs, and committing to operations and maintenance of walk and cycle installations. Mobility management refers to motivational campaigns and behaviourally targeted initiatives, such as limiting car use and stimulating to sustainable transport (Strand *et al.*, 2015). I refer to those working with physical facilitation as bicycle planners and those working with mobility management as mobility managers.

The aim of the study is to develop understanding of prerequisites for collaboration at an interdisciplinary workplace targeting the zero-growth target and increasing the cycle share. Taking the practice of increasing the cycle share as the unit of analysis, I ask two research questions: *What is characterising the practice in terms of meanings, materials and competences? What prerequisites for closer collaboration can be identified for the practice to meet the goal of increasing the cycle share of all travels?*

The study starts with a background description of the cycle share in Norway and a closer look at the call for collaborative governance. Then I explain the practice-theoretical framework (Shove *et al.*, 2012) and the framework for analysing collaboration (Emerson *et al.*, 2011). This is followed by an outline of the methodical decision, and then the analytical results. In chapter 6, "Discussion", we view the analytical results in a broader literary perspective.

2 Background

Below I present the sociohistorical and political background for increasing the cycle share and collaborative initiatives in climate change governance in Norway.

2.1 Political will and the environmental argument

In *The bicycle's history in Norway*¹, Magne Brekke Rabben (2017) neatly peddles through two hundred years of history. In Norway, the environmental argument for cycling first arose in the 1960s. The motivation was better air quality and less car noise in local environments (Rabben, 2017, p. 241). In the 1980s, the environmental case got further support, promoting the engagement for bicycling. The main background was the UN established Brundtland Commission's report *Our Common Future*, published in 1987, introducing the concept of sustainable development. An important aspect of the concept was the fear of global warming due to overuse of fossil fuels. An obvious step was to facilitate for sustainable transport solutions such as cycling, walking and public transport. The Norwegian government followed up with a white paper to the Storting about environment and development in 1989. From now, the bicycle and the environment were seen together more than ever before. The last years Norwegian politicians have increasingly been promoting cycling (a.a., pp. 221–222, 242).

The TØI-report (Strand *et al.*, 2015), 'Norwegian cycling policy – on track', reviews the development of Norwegian bicycle politics the last fifty years. According to the report, there has been a rhetorical breakthrough in plan and strategy documents with well-intentioned policy formulations. However, there seems to be a gap between rhetoric and implementation, which the report refers to as collective impotence among the bicycle-political actors. Actors across the state and local level and the public and private sector are not sufficiently pulling in the same direction. Other interests appear to transcend the shared interest in getting more people on their bicycle. In some instances, institutional organising, such as the authority, organising or plan production, also prevents accomplishments (Strand *et al.*, 2015).

2.2 A call for collaborative governance

Governments and public officials have a hand in reproducing institutions and systems, and the versions of normal and acceptable ways of life associated with them. They also have a hand in influencing how cycling is characterised (Shove *et al.*, 2012, pp. 153–158). Emerson and Murchie (2010, pp. 149–150) argue that the climate change imperative requires a significant transformation, suggesting that collaborative governance may help in responding to challenges through shared engagement, decision making and action. Governance is the act of governing, both in the public and/or private sector. Meanwhile, collaborative governance refers to processes and structures that engage people constructively across different boundaries to carry out purposes that could not be accomplished separately (Emerson *et al.*, 2011). For example, collaboration between both administrative levels and sectors at the same level. I focus on collaboration between practitioners at the same administrative level who work in two different disciplines, one targeting the physical aspect of increasing the cycle share and the other targeting social factors.

The Directorate of Public Roads (Espeland & Amundsen, 2012) states that encouraging people to use the car less and ensure more and better infrastructure is foundational to increase the cycle share. Cyclists have different prerequisites and needs, from adult utility

¹ My translation from the Norwegian title: *Sykkelens historie i Norge*.

cycling to playing and school traveling children. Prerequisites and needs relate to both physical adaption and motivational campaigns to make cycling a natural choice of transport. Different actors across sectors and administrative levels must collaborate to build infrastructure and cycle culture, making cycling the natural choice of transport for more people than it is today (Espeland & Amundsen, 2012)

Research on inter-organisational collaboration is characterised by a wide variety of disciplines, research paradigms and theoretical perspectives (Huxham, 2003). By some, the call for collaborative initiatives is a response to growing specialised and distributed knowledge, and complex and interdependent institutional infrastructure (Ansell & Gash, 2008). In relation to the zero-growth target, Norwegian institutions are becoming increasingly interdependent. A priority within the National Transport Plan (NTP), 2018-2029, is to increase collaboration between administrative levels (St. meld. nr. 33 (2016-2017)). The NTP states that meeting the zero-growth target depends on extensive commitment and good collaboration between the state, municipalities, county administrative boards and across sectors. A recent report from Nordland Research Institute, 'Barriers to more sustainable mobility – experiences from three Norwegian cities'² (Bardal *et al.*, 2019), identify seven barriers towards more sustainable mobility; cultural-, political-, judicial-, organisational-, knowledge related-, economic- and technological barriers. Findings within the organisational barrier show the importance of collaboration across agencies for the benefit of communication and knowledge, though this is not always an easy achievement (Bardal *et al.*, 2019).

The mentioned TØI report calls for a more comprehensive and integrated approach where physical and social factors are dealt with together more than what has been the case in cycling policy and planning so far (Strand *et al.*, 2015). Spotswood *et al.* (2015) call for a practice theoretical perspective which at its core includes a simultaneous view on bicycle-infrastructure investment, bicycle goals and cyclist socialisation/recruitment. This includes viewing cycling as a social issue. Altogether, these aspirations depend on utilizing the potential of interdisciplinary approaches to bicycle policy (*ibid.*). Specifically including interdisciplinary collaboration between engineers, who can build traffic technical bicycle pathways, and social scientists, who understand how bicycle culture, motivation and meaning-making can change (Strand *et al.* 2015).

Inspired by Strand *et al.*'s (2015) and Spotswood *et al.*'s (2015) challenge, this study is constructed within a theoretical framework where the practice of increasing the cycle share is the unit of enquiry, enforcing a shared view on physical and social factors. The next chapter clarifies the theoretical framework. First, I present an introduction to practice theory and Shove *et al.*'s (2012) practice-based conceptual framework of meaning, material and competence. Second, I present an overview of collaborative dynamics developed from Emerson *et al.*'s (2011) Integrative Framework for Collaborative Governance.

² My translation from the Norwegian title: 'Barrierer mot mer bærekraftig mobilitet. Erfaringer fra tre norske byer'.

3 Theoretical framework

The theoretical framework I apply to understand the practice in question is based on Shove *et al.* (2012). Theories of practice (PT) can contribute to understanding social practices' implications for patterns of institutions and connected infrastructures (Shove *et al.*, 2012, pp. 1–2). A characteristic of PT is to treat social practices at the centre stage, not simply as passages between human subjects and social structures (a.a., p. 13). PTs tend to focus on shared understandings, norms, meanings, practical consciousness and purposes (a.a., p. 15).

When treating practices at the centre stage, Shove *et al.* (a.a., p. 3) relate to agency and structure as described by Anthony Giddens' structuration theory. Giddens describes a mutual dependency of agency and structures (Giddens, 1984, p. 25). Practice theoretical impetus is foremost related with philosopher Theodore Schatzki's late 1990s work (Shove *et al.*, 2012, p. 6). Schatzki defines practice "as a temporally unfolding and spatially dispersed nexus of doings and sayings" (Schatzki, 1996, p. 89), a nexus meaning that the doings and sayings are linked in certain ways. How unfolding of practices take place is further developed by Andreas Reckwitz (2002). Reckwitz presents a summary of key features from prominent theoretical approaches. He positions PT as a subtype of social and cultural theory, implying that social order is embedded in collective cognitive and symbolic structures. As a cultural theory, what makes PT special is how it places the social, specifically viewing individuals as carriers of a practice.

"A 'practice' (*Praktik*) is a routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge." (Reckwitz, 2002, p. 249)

Mental activities, such as the element know-how are "qualities of the practice in which the individual participates, not qualities of the individual" (Reckwitz, 2002, p. 250).

Inspired by Giddens, Reckwitz and Schatzki, among others, Shove *et al.* (2012) develop three concepts and bring a renewed approach into understanding how society changes and stays the same. The three concepts or elements construct the practice by being interdependent and mutually shaping (a.a., p. 32). A practice depends on specific combinations of the elements and links between the elements, meaning that the practice will remain effective if elements and links between them do not change (a.a., pp. 24-25). The elements emerge, persist, shift and disappear as connections between them are made, sustained or broken (a.a., p. 19). Using PT in this study is useful to demonstrate characteristics of the elements of the practice in question. It is also useful to highlight prerequisites for collaboration within each of the elements. Furthermore, PT enables knowledge about norms and how the characteristics of the practice are reproduced.

Below I define Shove *et al.*'s (2012) three elements and describe how I have chosen to apply the concepts to answer my research questions.

3.1 Meaning, material and competence

Shove *et al.*'s (2012) three elements of practice, that is meaning, material and competence (see Figure 1.), were leading for choices related to the data collection and the following process. Without results connected to the elements, this study would not be possible. The results and analysis are first structured to answer the research question, *what is characterising the practice in terms of meanings, materials and competences?* To answer the second research question, *what prerequisites for closer collaboration can be identified for the practice to meet the goal of increasing the cycle share of all travels*, the focus lays on what meanings, materials and competences mean in relation to collaboration. Details about how the practitioners' work (their strategies and methods) to reach the zero-growth

target and increase the cycle share would be interesting to learn more about bicycle planning and mobility management, but this is not the purpose of the study.

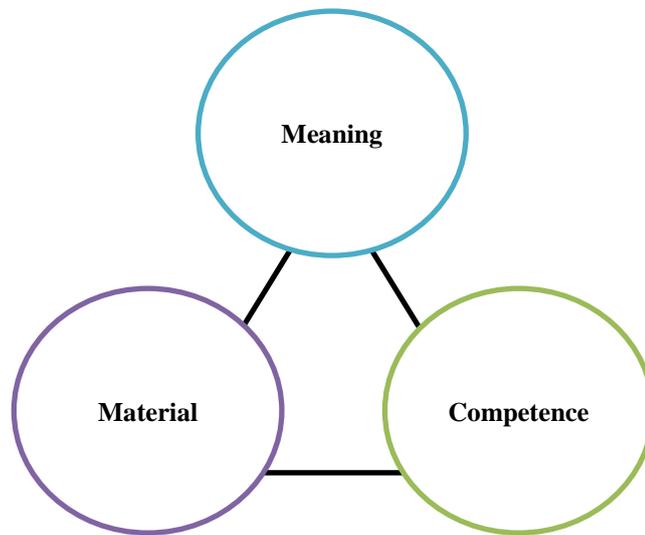


Figure 1. Elements of practice. Developed from Shove *et al.* (2012, p. 14).

The first element of practice is meaning, which “include symbolic meanings, ideas and aspiration” (Shove *et al.*, 2012, p. 14). Relevant to the element of meaning is that associations can be made, broken and appropriated quickly (Hebdige, 1979 see Shove *et al.*, 2012, pp. 60–61), making the element of meaning the most delicate of the three elements. Here, I analyse the reasons and associations the practitioners of the practice in question have with their practice and increasing the cycle share. Why are they doing what they are doing? Is it something they find difficult with their tasks? What are their aspirations? What do they find important? How do they approach difficulties and aspirations? What meanings do they associate with collaboration?

The second element of practice, material, includes “things, technologies, tangible physical entities, and the stuff of which objects are made” (a.a., p. 19). In order to view the diffusion of the material element, the point is to recognize forms of access and transportation (a.a., pp. 46-47). In this study, I analyse access to information and transport of physical entities within the practice of increasing the cycle share. What information and facilities do the practitioners have access to? Which things are they using? How are they using information, facilities and things? What material do they need to communicate with each other? How are they using the material to communicate?

Finally, the third element of practice is competence, encompassing “skill, know-how and technique” (a.a., p. 19). This element includes both competences that are picked up on without much effort and more trained competence (a.a., p. 48). Here, I analyse the knowledge, skills and experiences that the practitioners say they use to increase the cycle share. What do the practitioners need to know to fulfil their tasks? What skills are they using? Do they use others’ competence and are others using their competence? If yes to the latter, how do they use each other’s competence?

3.2 Collaborative dynamics

As stated in the introduction, working towards the zero-growth target and increasing the cycle share of all transport depend on interdisciplinary approaches, where physical and social factors are viewed together. The prerequisites for collaboration are important to investigate to understand what prerequisites the interdisciplinary practice in question has

for closer collaboration in the context of meeting the goal of increasing the cycle share of all travels.

Shove *et al.*'s (2012) conceptual framework is useful to analyse the elements of practice, however, it does not specify prerequisites for collaboration. In order to identify prerequisites for collaboration, this study includes a second framework; Emerson *et al.*'s (2011) Integrative Framework for Collaborative Governance. Governance is the act of governing, both in the public and/or private sector. Collaborative governance is:

“[...] the processes and structures of public policy decision making and management that engage people constructively across the boundaries of public agencies, levels of government, and/or the public, private and civic spheres in order to carry out a public purpose that could not otherwise be accomplished.” (Emerson *et al.*, 2011, p. 2)

Emerson *et al.*'s framework is based on a broad literature review within a wide range of fields, including public administration and environmental management. It includes nested dimensions of collaborative governance; from the broader system and external drivers to collaborative dynamics, actions, impacts and adaptations. The framework's structure enables scholars to “study a collaborative governance regime (CGR) as a whole, or to focus on its various components and/or elements” (Emerson *et al.*, 2011, p. 2). My study aims at understanding collaboration in a limited part of a workplace in a municipality, not to understand an entire governance regime. Therefore, it is useful that Emerson *et al.*'s framework is structured so that I can use a limited part of it. I use collaborative dynamics to analyse prerequisites for closer collaboration in the practice of increasing the cycle share. Table 1. presents an overview of the collaborative dynamics, its components and elements. The components are interactive and cyclical. Below, I present the collaborative dynamics as presented by Emerson *et al.* (2011).

Table 1. Collaborative dynamics. Developed from Emerson *et al.*'s (2011) Integrative Framework for Collaborative Governance.

Dimension	Collaborative dynamics		
Components	Principled engagement	Shared motivation	Capacity for joint action
Elements	Discovery	Mutual trust	Procedural and institutional arrangements
	Definition	Mutual understanding	Leadership
	Deliberation	Internal legitimacy	Knowledge
	Determination	Shared commitment	Resources

Principled engagement occurs over time and in different settings and engages people to work across different content and levels. Face-to-face dialogue is advantageous, but not always essential. The elements refer to different aspects of principled engagement. *Discovery* refers to revealing and identification of individual and shared interests, concerns and values, and relevant information. *Definition* refers to the process of building shared meaning through common purpose and objectives. The third element, *deliberation*, is an essential ingredient of successful engagement and refers to reasoned communication, interest and effectiveness of conflict resolution, asking and answering challenging questions. Finally, processes of joint *determination* include procedural decisions such as tabling discussion, assigning a workgroup and substantive determinations like reaching agreements.

Shared motivation is initiated by principled engagement and refers to interpersonal and relational elements of collaborative action. *Mutual trust* enables people to see, appreciate and reveal themselves to others. This is viewed as pivotal within the cycle of shared motivation. It generates *mutual understanding*, being the ability to understand and respect other's positions and interests. Mutual understanding further generates *internal legitimacy*

and motivates ongoing collaboration, which again leads to *shared commitment*, enabling people to cross boundaries that separates them.

As a collaborative dynamic, the collaborative governance finally needs **capacity for joint action**, in which all the elements must be at a level that is enough to accomplish agreed upon goals. This includes *procedural and institutional arrangements*, which concerns necessary interaction. It includes *leadership*, which can vary from time and context in the process. Furthermore, it includes *knowledge* that is needed and shared with others. And finally, *resources*, such as funding, time, technical and logistical support.

Making collaborative dynamics explicit can be helpful to ensure an effective and appropriate CGR (Emerson *et al.*, 2011). Not all components, nor elements of collaborative dynamics, are always necessary or to the same extent. Emerson *et al.* argue that by analysing and discussing the components and underlying elements, it is possible to bring forward a perspective on progress so far and strategic directions for the future.

4 Methodology

The study starts from a social constructivist approach to qualitative research. The socially constructed worldview and qualitative research are interested in understanding something meaningful about a specific phenomenon or problem. How individuals make sense of things relate to interactions with others and through historical and cultural norms operating in people's lives, hence social constructivism (Creswell & Creswell, 2018, p. 8).

Qualitative research enables a complex view of a phenomenon, it is suitable to explore and understand the meaning individuals or groups ascribe to a social or human problem (a.a., p. 4). These aspects are significant to the study, as the study is interested in how individuals make sense of a phenomenon, specifically the practice in which they work.

The practice is limited to an existing practice in a unit in a Norwegian municipality. I have chosen to view it in terms of PT to better understand how the practitioners in the practice work and collaborate. Both the unit's and the specific practice's mission is the zero-growth target. To enable visualisation of the practice, this paragraph includes a short description of aspects of the practice. The practitioners who carry the practice are either representing bicycle planning or mobility management, as described in the introduction. They have been a part of the practice in less than one to five years. The practitioners sit in the same open landscape and share the same lunchroom. Those working with bicycle planning sit next to each other and those working with mobility management sit next to each other. Together, these practitioners carry what I refer to as the practice of increasing the cycle share. I want to clarify that the practice in question does not refer to all similar practices in the world, though the results can be applied beyond the specific practice.

Data was collected through observations and interviews with the practitioners of the practice of increasing the cycle share. All the practitioners, who work with bicycle planning or mobility management, took part in either an interview, observations or both. Observations and interviews enabled me to collect data for an in-depth study and understanding of the practice. This study is determined to understand characteristics of the practice from the view of the practitioners. The interviews enabled the practitioners to express their subjective reflections and experience of the practice. It was useful to complement the interviews with observations. Through observations, I saw and heard how a group of the practitioners made sense of the practice together, and what materials and competences they used in a specific setting. Together, interviews and observations enabled a detailed data collection for describing the practice.

4.1 Interviews

A total of seven semi-structured, face-to-face individual interviews were conducted with three bicycle planners and four mobility managers. The interviews were conducted within two weeks, in Norwegian and in rooms at the workplace. Each interview lasted between 40 minutes and one hour. The participants were informed about the purpose of the interview and that they could withdraw at any time without explanation. All approved audio-recording.

I had prepared an interview guide with pre-set topics and a list of questions connected to the topics. The pre-set topics included meanings, materials, competences and collaboration. As a semi-structured interview, open-ended questions allowed the informants to reflect and speak freely (Creswell & Creswell, 2018, p. 187). As interviewer, I was free to change the ordering of questions and pick up on and add additional questions (Bryman, 2012, p. 471). By in large, however, the same questions and similar wording were used in all the interviews.

4.2 Observations

The observation data is based on three meetings among the mobility managers. I was not able to conduct observations with the bicycle planners. I conducted the observations by sitting together with the practitioners around a round table, listening and seeing them communicating. The purpose of each meeting was for the group of mobility managers to update, discuss and plan around their activities. Each meeting lasted between 35 minutes and one hour. All the meetings were audio-recorded, which enabled me to focus the notetaking on the things that could not be recorded, such as the material that the practitioners were using. I did not engage with the practitioners during the observations. My role can be described as a 'non-participating observer with interaction', where interaction occurs through other activities (Bryman, 2012, p. 444). Following Bryman, I interacted with the participants through interviews, which is my most important source of data. For every meeting, I asked the practitioners to approve my presence and the recording, even though it was often the same people in each meeting. During one meeting I received a positive recognition that I was very careful and alert.

Each mobility manager was present in at least two of the meetings. At a minimum, one of the meetings, that a practitioner participated in, was after the practitioner's interview. This enabled me to pay attention to what I had heard in the interview and relate it to what I saw and heard during the meetings. I looked for material and listened to the knowledge and skills that each practitioner used. Similar data that occurred from the interviews and the observations ensured a deeper understanding of the practice.

4.3 Validity

According to Creswell and Creswell (2018, p. 200) researchers should aim to use multiple procedures, enhancing the researcher's ability to evaluate the accuracy of findings and convince readers of that accuracy. Having triangulated the empirical data from the mobility managers through interviews and observations, these results are investigated based on a more diverse dataset, enhancing the validity compared to that of the bicycle planners. Another mode of increasing the validity of the results is to discuss the results beyond the specific context (Bryman, 2012, p. 47). By relating the empirical data to literature beyond my study in chapter 6, "Discussion", I aim to further increase the validity of the results.

4.4 Anonymity

Even though the most important data source to this study is interviews with individual practitioners, the analytical results are focused on the bicycle planners and mobility managers as groups. The practitioners' names have been kept anonymous. Despite the anonymity, I cannot ensure that the practitioners will not be able to recognise each other. For this reason, all quotations have been approved by the respective practitioner over e-mail. They have approved the quote, the topic that the quote is an example of and my English translation. Some practitioners suggested changes in the translation, which I have followed up on.

I made the decision to keep the municipality anonymous after the interviews. Again, the focus of this study is the groups of practitioners, not the municipality itself. Keeping the name of the municipality could be useful to explain more external factors, such as the political context. It could also be beneficial in giving the informants a voice in research. However, the study is focused on collaborative dynamics in the practice of increasing the cycle share, not the municipality as such or the broader governance regime of the Norwegian zero-growth target.

4.5 Processing the data

The data has been collected, transcribed, coded and thematically organised. When piecing together and gaining focus on qualitative field material, Crang and Cook (2007, p. 114) suggest to balance a creative and structured process.

I read through the data several times, colour coded and discovered themes manually. First, I marked predetermined codes of meanings, materials and competences with respective colours within the interviews and observations. Subsequently, I deconstructed the material, pulling each code out of the individual interviews and into a separate document. This was a structured process that I followed up on with a more creative process. The latter included mind maps for each code, enabling me to identify themes across the data.

Prior to the data collection, the planned analysis incorporated Shove *et al.*'s (2012) practice conceptual framework. Following the data collection, it became clear that to say something meaningful about the practice's prerequisites for closer collaboration, the analysis would benefit from concrete measures or criteria regarding collaboration. Therefore, Emerson *et al.*'s (2011) collaborative dynamics were added to the study.

The next chapter is devoted to the analysis of the empirical results through the described theoretical framework of Shove *et al.* (2012) and Emerson *et al.* (2011).

5 The practice of increasing the cycle share

The empirical results are presented and analysed by following the elements of Shove *et al.*'s (2012) practice theoretical framework and Emerson *et al.*'s (2011) collaborative dynamics. I follow the elements meanings, materials and competences separately, though it should be kept in mind that the elements are interdependent (Shove *et al.*, 2012, p. 32) and that data between the elements can belong to more than one element. The subchapter 5.1, 5.2 and 5.3 are devoted to describing the practice and to answer the research question, *what is characterising the practice in terms of meanings, materials and competences?* Subchapter 5.4 is devoted to identifying collaborative dynamics in the practice in question and answer the research question, *what prerequisites for closer collaboration can be identified for the practice to meet the goal of increasing the cycle share of all travels?* To clarify, 5.1, 5.2 and 5.3 is my analysis of the practitioners of the practice's sayings and interpretations. 5.4 is how I, influenced by Emerson *et al.* (2011), analyse the practice's prerequisites for collaboration.

As explained in chapter 3., "Theoretical framework", theories of practice tend to focus on norms, meanings and purposes (Shove *et al.*, 2012, pp. 8–9). Practices are constructed by active integrations of meaning, material and competence (a.a., pp. 24–25). The analytical results show that the practitioners are a diverse group. Still, I argue that they share sufficiently of meanings, materials and competences to view them as carriers of the same practice. Following Shove *et al.* (2012) I also argue that the study gains from viewing the two diverse groups of practitioners as carriers of the same practice. They claim that a fundamental characteristic of practice theory is to treat social practices at the centre stage, not as passages between human subjects and social structures (a.a., p. 13). Furthermore, the elements of a practice are interlinked and mutually shaping (a.a., p. 32). In sum, I win on viewing the practitioners as carriers of the same practice because 1) it allows me to describe the practice of increasing the cycle share in terms of its constituting elements, 2) focus on prerequisites for closer collaboration within the described practice and 3) take Strand *et al.*'s (2015) and Spotswood *et al.*'s (2015) challenge to enforce a shared view on physical and social factors.

5.1 Meanings characterising the practice

For Shove *et al.* (2012, p. 23), the element of meaning represents the social and symbolic significance of participation in a practice. When analysing the data in relation to the element of meaning, I have paid attention to how the practitioners (bicycle planners and mobility managers) of the practice interpret and make sense of their aspirations, work tasks and ideas. Above all, the practitioners say they aspire to *make cycling easy and safe*, though the bicycle planners and mobility managers express different associations with the meaning of making cycling easy and safe. Furthermore, the practitioners have ideas connected to how their work could *benefit of closer collaboration* between the two groups of practitioners. Today there is little collaboration between the groups of practitioners. A recurrent theme is a shared sense among the practitioners of *why collaboration does not happen*.

5.1.1 Make cycling easy and safe

Both the bicycle planners and the mobility managers say they aspire to make cycling easy and safe, as this can enable a broader part of the population to cycle. When the two groups of practitioners describe how they meet this aspiration they say quite different things.

In making it easy and safe to cycle, the mobility managers tend to associate easy and safe with peoples' school, work, and leisure travels. Importantly, parents and children should feel safe for the children to move in traffic and get to school by themselves. In contrast, the

bicycle planners tend to associate easy and safe with planning, deciding and placing orders for bicycle installations. The installations ought to be wide and safe so those who do not dare to cycle will start cycling. For a bicycle planner, it is important to “make safe installations that are experienced as easy and safe and intuitive”.

Elements like that of meaning can circulate within and between different practices, acting as a connective tissue holding social arrangements in place (Shove *et al.*, 2012 p. 36). The practitioners share the meaning of why people do not travel more by bicycle; people feel unsafe and it is not adequately easy to choose cycling over other modes of transport. Making it easy and safe to cycle requires continuous work, they say. The shared meaning and background for making it easy and safe to cycle stands out as a connective tissue holding the practice of increasing the cycle share together.

5.1.2 *Benefits of closer collaboration*

The practitioners describe their workplace as open and inclusive. The practitioners say that they want to share and use each other’s competence to ensure good results. They already share experiences and information with each other. At the same time, particularly the mobility managers express a need for more information about what other practitioners work with. According to Shove *et al.* (2012), meanings ‘travel’ as practices are re-grouped and categorized in different ways (p. 61). Meanings are not literally stored somewhere, but they do have a historical aspect that should not be overlooked (a.a., p. 62). The groups of bicycle planners and mobility managers share the idea that their work tasks would benefit from closer collaboration. This idea stems from somewhere, for example, that the practitioners have experienced or learned about how another can contribute and possibilities for closer collaboration.

The practitioners have discovered that they can become better at demonstrating results. Both the bicycle planners and the mobility managers say that they need to get better at showing that their measures have an effect. A benefit of closer collaboration, they say, is to increasingly share information they can use to demonstrate results.

Closer collaboration could also enable them to work with aspired projects that neither of the groups feel ownership of today. For example, practitioners within both groups say that they would like to ensure service stations for maintaining bicycles. Today, they say, this project does not correlate with the work tasks of either of the groups. One of the mobility managers talked about the groups as two circles, explaining how it is challenging to meet whatever falls between these circles. Engagement in cross-group activities appears challenging when meanings, materials and competences are associated with the work tasks separately.

5.1.3 *Why collaboration does not happen*

All the practitioners say that there is little or no collaboration between the groups of bicycle planners and mobility managers. Practitioners within both groups say they are surprised of how little the groups collaborate, that they aim to collaborate more or that they are open to collaborating more.

The bicycle planners and the mobility managers share the meaning of why collaboration does not happen. Practitioners within both groups say that the work tasks of one another are important to increase the cycle share. At the same time, they say that their different work tasks are a central explanation to why closer collaboration is not happening. As expressed by one of the bicycle planners, “[...] there is not so much collaboration, because we have very different work tasks”. Similarly, a mobility manager says that “the bicycle group should be working with infrastructure. They are not working in the intersection of people”.

According to Shove *et al.* (2012) how practitioners spend their days influences the fate and the future of the practice. This relates to the contemporary interpretation of clock-time, “that minutes devoted to one practice cannot be invested in another” (p. 127). As for the practice of increasing the cycle share, the practitioners have a limited amount of work

hours. Based on the practitioners' sayings, they appear to, above all, spend their work hours conducting either bicycle planning or mobility management, leaving little time for activities where the practitioners can engage in collaborative activities across the groups.

How elements of meaning, material and competence circulate and integrate varies (a.a., p. 25). In the practice of increasing the cycle share, meanings of making it easy and safe, benefits and challenges of collaboration, integrate with the elements of material and competence. As we shall see in the two next subchapters, the meanings are interdependent and mutually shaping the elements of material and competences.

5.2 Materials characterising the practice

Forms of transportation and access are typically important for the diffusion of the material element (Shove *et al.*, 2012, p. 47). In this study, I have paid attention to access to and transportation of information, technologies, physical space and objects the practitioners say that they are using. Again, the focus is on how the results relate to collaboration, not details about the methods and strategies the practitioners use to increase the cycle share. The practitioners view *access and usage of information from the public* as valuable to learn about people's worries and demands, and to demonstrate results. Related to collaboration, the practitioners also view access and usage of the *physical workspace and meetings* as important arenas to conduct their work.

5.2.1 *Access and usage of information from the public*

The mobility managers collect information from the public that practitioners within both groups say are important to understand people's needs and increase the cycle share. The mobility managers collect the information through surveys of travel behaviour and communicating with people. They send information of relevance to the bicycle planners. The bicycle planners say they appreciate the information, "The mobility managers are out and meeting people and companies, and they bring lots of good thoughts from them that are valuable for us."

Material components tend to be defined in relation to their role (Shove *et al.*, 2012, p. 47). The practitioners talk about the information in question in relation to evaluating measures and anchoring priorities and measures with the users. For the bicycle planners, it is important to know how many are using the installations. They can find this number and information by counting. At the same time, as one of the bicycle planners says, to increase the cycle share, it is just as important to collect information about those who do not cycle and why they do not cycle. This is information that the mobility managers actively collect and receive as a part of mobility management. One of the mobility managers also reflected upon how they could use the information from the people in better ways, suggesting that better information could give the bicycle planners "meat on the bone to argue on some places that they want to do segment measures".

5.2.2 *Physical workspace and meetings*

When viewing the element of material, it is appropriate to indicate how and where information and objects move (Shove *et al.*, 2012, p. 47). Meetings and the physical workspace are important arenas for the practitioners of the practice of increasing the cycle share. As expressed by one of the mobility managers concerning the workspace:

"I could not have done this job if I sat and had home office five days a week. That would not be good. So that is important. And also to have the other groups close by. Even though we do not work together every single day then it is something about being a little updated on what people are doing and how they work."

All the practitioners sit within reach from each other in an open landscape office space. Both bicycle planners and mobility managers say that sitting together and having access to each other is beneficial for working together. It enables them to ask quick questions ‘over the table’, during a coffee break or just when they pass each other in the office.

The practitioners also meet in more formal settings. Every second week, in what they refer to as information meetings, both the bicycle planners and mobility managers meet with other public officials in the unit, who actively work towards the zero-growth target. These meetings are supposed to cover many topics, including an update from the groups of practitioners, regarding their present work and future plans. The practitioners say they get much good information in these meetings. At the same time, some of the practitioners say that the five minutes each group has to present, are insufficient to cover ‘everything’ and understand thoroughly.

The latter is foremost an obstacle for the mobility managers. They say they have a big need for access to information on what the other practitioners work and plan to work with. To access relevant information, the mobility managers can listen to meetings among other practitioners, such as the bicycle planners. In general, the practitioners make sense of meetings as a good thing as long as there are not too many of them. Being a fly on the wall in meetings among other practitioners, the mobility managers say, could give them more information, while not requiring an extra meeting for others.

5.3 Competences characterising the practice

Competences can only transfer effectively in certain circumstances. Some capacities, such as knowing how to code, born of previous experiences, is critical for the life of the element of competence (Shove *et al.*, 2012, p. 53). Following Shove *et al.* (a.a., p. 19) the element of competence encompasses skill, know-how and technique. Within the practice of increasing the cycle share, I have looked at knowledge, skills and experiences that the practitioners make use of.

The two groups of practitioners generally build on different knowledge. How competences can accumulate and build is critical for the element’s availability within and between different groups (a.a., p. 53.), such as between the bicycle planners and mobility managers in the practice of increasing the cycle share. Among the bicycle planner’s, knowledge related to *bicycle infrastructure* is dominant. For the mobility managers, knowledge related to *behavioural change* is most prominent. The practitioners acknowledge and value that individual practitioners have different knowledge. At the same time, having different knowledge, they say that skills and *ability to ask and transmit knowledge* become increasingly important.

5.3.1 Knowledge motivating bicycle infrastructure and behavioural change

The practitioners of the practice of increasing the cycle share describe the competence of the practice as varied and exciting. They appear to share the meaning of what knowledge they need to increase the cycle share. They say they need knowledge to plan the bicycle infrastructure and knowledge about what it takes to change people’s behaviour.

According to Shove *et al.* (2012), appropriate background knowledge is necessary for complex and demanding forms of expertise (a.a., p. 132). In the practice of increasing the cycle share, individual practitioners have different backgrounds. Based on their backgrounds, the practitioners are carriers of different expertise. With that said, as for the other elements, we view the dominant *patterns* among the two groups of practitioners, not individual characteristics. The bicycle planners have knowledge to plan and place orders to ensure that the bicycle infrastructure gets built. Specifically, they have knowledge about traffic planning, signs and symbols, widths and handbooks among others. The mobility managers have knowledge about how people relate to habits and place among others. Much of what the mobility managers do is based on knowledge and theories springing from

environmental psychology. For example, knowledge about “[...] how one should pull, push a little in people to tip them over toward using the installations that we make. And fall out of their habits”, one of the mobility managers explains.

Elements of knowledge can transform the practice of which they are a part (Shove *et al.*, 2012, p. 50). In the practice in question, foremost among the mobility managers, the practitioners say they have much freedom to change their methods. As new competence comes in, they say, they have adapted the methods to the availability of competence.

5.3.2 Ability to ask and transmit knowledge

The practitioners say that they do not need to know everything themselves. A bicycle planner says that “One person does not know everything, but together many persons know a lot”. The practitioners say that it is common and necessary to ask questions and transmit knowledge among the practitioners of the practice, as expressed by one of the bicycle planners:

“So yes, dare to ask and use other people’s knowledge. It is nice and interesting to try and figure out things on your own as well, but then, you do not need to reinvent the wheel. Try to lean a little on each other.”

In the practice of increasing the cycle share knowing who to ask, they say, can be challenging and nearly a key attribute. Knowing who and where to ask can be particularly challenging when you are a newcomer. Some skills and know-how can be picked up on through learning by doing, often without noticing. Other skills and know-how require deliberate effort and hours of training (Shove *et al.*, 2012, p. 48). Learning who knows what takes time, either if it is a deliberative or unconscious process. One of the bicycle planners explains that:

“When working together for a longer period, you will become more familiar with your co-workers and more aware of what the others know. [...] sometimes one does not think about asking others for help because one does not think about what they can contribute with.”

Working together, they say, also includes the ability to transmit your own knowledge, not only learn from others. The practitioners transmit knowledge across the groups and appear to value each other’s inputs. They say that it is important to know when and where to contribute. Abilities to transmit knowledge appear more incorporated within rather than across the groups of bicycle planners and mobility managers. One of the mobility managers says that within their group, “I think everyone knows which place they have in the group and know when they should engage.”

In the previous subchapters, we have looked at what the practitioners say characterises the practice in terms of meanings, materials and competences. Based on the foregoing, in the next subchapter, I analyse the practice’s prerequisites for closer collaboration following Emerson *et al.* (2011).

5.4 Collaborative dynamics

There is little collaboration between the bicycle planners and mobility managers in the practice of increasing the cycle share. At the same time, they say it would be advantageous to collaborate more. As explained in chapter 3, “Theoretical framework”, the elements of practice are interdependent and mutually shaping (Shove *et al.*, 2012, p. 32) and they emerge, persist, shift and disappear as links between them are made, sustained or broken (a.a., p. 19). In the previous subchapter, it was useful for the analysis to treat the elements as autonomous trajectories. At the same time, elements are nothing unless integrated in a practice (a.a., p. 62). When viewing the practice’s prerequisites for closer collaboration, I bring the elements and their connective links closer together.

When analysing the prerequisite for closer collaboration I employ collaborative dynamics outlined by Emerson *et al.* (2011), as motivated in chapter 3.2. This means that the system context where the practice exists, is not included, counting political and socioeconomic affections. Nor are incentives or uncertainties that set directions for a collaborative governance regime (GGR). The CGR refers to the mode of, or system where cross-boundary collaboration is the prevailing pattern of behaviour and activity (Emerson *et al.*, 2011). I do not mean that a CGR should be the dominant regime in the practice of increasing the cycle share, but that it is helpful to learn from it, when aiming to understand prerequisites for closer collaboration. Analysing collaborative dynamics in the practice of increasing the cycle share is valuable, as the dynamics can propel collaborative actions by the CGR. Emerson *et al.* say that collaborative actions are, for example, more likely to be implemented if they are supported by the necessary capacity for joint action.

The account of the analysis is structured following the three interactive components of collaborative dynamics presented in section 3.2: principled engagement, shared motivation and capacity for joint action.

5.4.1 Principled engagement

Principled engagement refers to fair and civil discourse and open and inclusive communications informed by the perspectives and knowledge of all participants (Emerson *et al.*, 2011). It consists of four nested elements: discovery, definition, deliberation and determination. Through principled engagement, people work across boundaries to solve problems, resolve conflicts, or create value (*ibid.*).

The meanings, that the practitioners give to the practice, show prerequisites towards a CGR by the *discovery* of shared interests and values. Both bicycle planners and mobility managers have an interest in making cycling easy and safe. The practitioners also have shared interests in using the information from the public for evaluation, as presented under the element of material. They have also discovered competences they need for collaboration; asking and being open.

The analysis of meanings, materials and competences did not demonstrate that the practice includes the second element of principled engagement, that is *definitions* of continuous efforts for a common purpose and objectives. The practitioners say they collaborate on knowledge and information sharing, but they do not say that the initiatives are defined with continuous efforts for a common purpose. Following Emerson *et al.* (2011), strategic directions should be put in motion for practitioners to engage in defined collaborative processes and approach a CGR.

Emerson *et al.* (2011) denote the third element, *deliberation*, or candid and reasoned communication, as an essential ingredient of successful engagement. Deliberation can depend on the skilful advocacy of individuals or the effectiveness of resolution strategies. The practitioners of the practice in question make sense of their communication as open and inclusive. They motivate asking and sharing knowledge. They also show understanding for how other practitioners spend their time. Together, these aspects indicate prerequisites for deliberation to progress. At the same time, some of the practitioners indicate that they should share more information. In a way, critically, sharing and listening appear as an aspect that is not given sufficient attention.

The final element, incorporated in principled engagement, is processes of joint *determinations*. Emerson *et al.* (2011) pronounce that determinations do not have to concern procedural decisions or the final product of collaboration. Many determinations are made over time and appear as a repeating element. They propose that durable, robust and efficacious determinations can be produced through strong engagement processes such as agenda setting or determining final recommendations. Within the practice of increasing the cycle share, collaboration is met with interest. However, the practitioners do not express that they are making joint determinations. The bicycle planners and mobility managers share information and time in meetings, but this does not appear enough for shared

understandings or the ability to come to solutions together. For a CGR to take place, Emerson *et al.* propose that substantive determinations are made over time as an integrated element of principled engagement.

5.4.2 Shared motivation

The second component is shared motivation, which refers to interpersonal and relational aspects of the collaborative dynamics. It consists of trust, mutual understanding, internal legitimacy and commitment. Shared motivation is initiated by principled engagement, though once initiated, shared motivation can also accelerate the principled engagement (Emerson *et al.*, 2011).

Over time, and as the practitioners get to know each other, they can progress in the first element of shared motivation, that is development of *mutual trust*. Within the practice of increasing the cycle share, relations appear to be characterized by mutual trust. The practitioners are, for example, able to go beyond their group-based frames, see and appreciate differences in others. For the element of mutual trust, it appears as the practice includes prerequisites for closer collaboration, enhancing its collaborative dynamics and the CGR.

Within the practice, prerequisites for closer collaboration also seem to be made through *mutual understanding*. This is the ability to understand and respect others' positions and interests, even when one might not agree (Emerson *et al.*, 2011). The practitioners want to spend time in projects where they can collaborate to reach shared goals. At the same time, they understand and respect the work of one another, which limits the time for work across the groups. Then again, it should be kept in mind that there is little collaboration between the groups, so the mutual understanding is not necessarily well contested in more conflicted situations.

The first two elements, mutual trust and mutual understanding, are important in developing a sense of interpersonal validation and cognitive *legitimacy*. That participants in a collective endeavour experience one another as trustworthy and credible, with compatible and interdependent interests, legitimizes and motivates ongoing collaboration (Emerson *et al.*, 2011). The groups of practitioners, in the practice in question, have compatible interests in making it easy and safe to cycle and increasing the cycle share. They want to collaborate more, for example on the information from the public. One explanation for this desire appears to be an increasing need to demonstrate results, making usage of information from the public a compatible and interdependent interest. Altogether, the relationship between the practitioners appears trustworthy and credible, enabling them to embark in processes including interdependent interest. Whether or not existing legitimacy is enough for the practitioners to engage in closer collaboration, should be defined through principled engagement (*ibid.*).

Prerequisites for collaboration are evident within the shared motivation and its elements of mutual trust, mutual understanding and legitimacy. While mutual trust and reciprocity can reinforce confidence in legitimacy and efficacy of the collaborative dynamics (Thomson & Perry, 2006 see Emerson *et al.*, 2011), legitimacy enable bonds of shared *commitment* (Emerson *et al.*, 2011). Commitment is important in enabling practitioners to cross organizational boundaries and commit to a shared path (*ibid.*). Within the practice of increasing the cycle share, the practitioners appear interested in, but not committed to, a shared path. Time spent in conducting their respective work tasks as bicycle planners or mobility managers might be an explanatory factor.

5.4.3 Capacity for joint action

A CGR includes capacity for joint action that enables collaboration to generate outcomes that could not be accomplished separately. Emerson *et al.* (2011) conceptualize capacity for joint action as the combination of four necessary elements: procedural and institutional arrangements, leadership, knowledge and resources. Capacity for joint action is the

intermediate outcome of the interacting cycles of principled engagement and shared motivation. As joint capacity develops, it can also strengthen the principled engagement and shared motivation.

Procedural and institutional arrangements encompass structures and protocols that enable fixed and long-term collaboration (Emerson *et al.*, 2011). As described with the meaning of making it easy and safe to cycle, the practitioners of the practice tend to base their reasonings on the material and competence they use in their daily work. And again, their daily work includes little to no collaboration between the groups of bicycle planners and mobility managers. Capacity for joint action serves as the link between strategy and performance (Saint Onge & Armstrong, 2004 see Emerson *et al.*, 2011). For the practice in question, procedural and institutional arrangements appear to limit strategies and performance across the groups. Except from sharing information and knowledge, collaboration across the groups appears as something extra. The procedural and institutional arrangements in the practice in question do not include structures and protocols that enable fixed and long-term collaboration, leaving limited capacity for joint action.

Within procedural and institutional arrangements, protocols that govern collaborative dynamics are also norms of reciprocity or formal rules of network interactions (Thomson & Perry, 2006 see Emerson *et al.*, 2011). Within the practice of increasing the cycle share, access to shared meetings enables interaction between the groups and enhances capacity for joint action. The practitioners also motivate network interactions by encouraging asking and sharing, viewing some prerequisites for closer collaboration within the existing procedural and institutional arrangements.

Collaborative governance demands and cultivates opportunities and roles of *leadership*. Emerson *et al.* (2011) describe leadership as an important element for joint action. Leadership can be an external driver and can include facilitators, representatives of an organization, among others. Some roles are essential in the beginning, during moments of deliberation or during decision making and so on. Within the practice of increasing the cycle share, the practitioners say they foremost depend on someone to take the initiative (that is, take the lead) to start collaborative projects.

The third element of capacity for joint action is *knowledge*. It refers to “the social capital of shared knowledge that has been weighed, processed, and integrated with the values and judgments of all participants” (Emerson *et al.*, 2011, p. 16). Knowledge, here, is somewhat different from Shove *et al.*'s (2012) connotation of competences, in that Emerson *et al.* appear more concerned with knowledge being shared. The analysis of the element of competence showed that the practitioners do not share the same knowledge per se, but they are open to transmit their knowledge to other practitioners. The ability to transmit high-quality knowledge within organizations is the essence of conducting high-performance organizations and networks (Saint-Onge & Armstrong, 2004 see Emerson *et al.*, 2011). My study indicates that the practitioners are positive and willing to transmit high-quality knowledge, increasing the capacity for joint action and prerequisites for closer collaboration. At the same time, we shall not forget that the practitioners' meanings are made sense of in relation to a practice that includes little collaboration. If the practitioners in the future, engage in closer collaboration, they might experience that the meaning of where knowledge about behavioural change and traffic planning ‘belong’ changes. This might require an increased need to transmit high-quality knowledge.

The final element for capacity for joint action is *resources*, which refers to time, technical and logistical support, administrative and organizational assistance, skills for analysis or implementation, and expertise, among others (Emerson *et al.*, 2011). A resource, for collaboration in the practice of increasing the cycle share, is its variety of expertise. However, all together, the practice appears to include limited resources for joint action. Time, for example, appears principally limited. A point of reference throughout this chapter has been that meanings, materials and competences are generally associated with the groups separately, which leaves little time for joint action. How much time the practice should devote to collaboration is a discussion of its own and beyond my study.

6 Discussion

In this chapter, I discuss the analytical results in a broader literary context.

The analysis found that the practitioners of the practice of increasing the cycle share have shared values and interests. In addition, they make sense of the practice as open and respectful to differences. They also say they use the office and communicative abilities to share information and knowledge. Furthermore, mutual trust and legitimacy appear as important for the practitioner's relationship. Together, these aspects of the practice appear as prerequisites for closer collaboration. The results are in line with Vigar (2017), who finds that collaborative processes require particular skills, notably listening, talking, narrating and interpreting. Similar results are also reported by Ansell and Gash (2008), who find that trust is a crucial factor for a successful collaborative process. Specifically, they note, commitment to a shared process depends on the trust that other stakeholders will respect your perspective and interests. The analysis of the study at hand demonstrates that trust in the practice in question is not necessarily well contested in more collaborative processes. It may be that commitment to closer collaboration puts the relationship between practitioners on trial. Huxham (2003) argues that the relationship between individuals in collaboration is fundamental to get things done. When viewing relationships among practitioners, Huxham suggests that it is more appropriate to focus on trust building between practitioners than the trust itself. He notes that practitioners often do not have the luxury of deciding who to work with. Practitioners join and leave, creating dynamic changes with individual movements. The latter is exemplified in my study in that the mobility managers' work methods changed with individuals' competence entering the practice. As we have learned from Shove *et al.* (2012), changes within one element are likely to induce changes in other elements.

Prerequisites for collaboration are visible through procedural and institutional arrangements that encourage network interactions, specifically, meetings, shared workspace and norms of asking and sharing. Valuing arenas to engage, is confirmed by Bardal *et al.* (2019) study of three Norwegian cities. The informants, in their study, expressed that the actors in the collaborative initiatives have their own values, norms, routines and competences, therefore, arenas are important. The informants in my study appear to share values and norms, making the arenas less needed in the same terms as Bardal *et al.*'s study. At the same time, through frequent contact in the shared space, the practitioners have learned about each other, as well as, see and appreciate each other's differences. This might not have been the case if they did not have frequent contact through the shared space.

While procedural and institutional arrangements encourage network interactions, I have argued that it also challenges prerequisites for closer collaboration. Above all, the challenge appears to lay in how the practitioners spend their time. Associations of meanings, material and competences for daily work are generally made sense of in relation to either bicycle planning or mobility management. In sum, the practice of increasing the cycle share appears to include little capacity for joint action. Had the procedural and institutional arrangements required more time for collaborative action, the practitioners could be enabled to make sense of the practice as more collaborative. This, again, would require material and competences for collaborative activities. Similarly, Shove *et al.* (2012, p. 127) argue that time is important, as it reflects the potential dominance of some practices over others. For collaboration to be effective, the practice should at a minimum include meanings that connect time and collaborative activities. Undoubtedly, as time is limited, collaborative activities could, if they do not coincide with existing projects, require sacrifices of today's work tasks.

The analysis demonstrates that work tasks within bicycle planning and mobility management supersede commitment and initiatives for a CGR. A possible explanation is that the practice of increasing the cycle share does not appear to contain defined collaborative processes that require interdisciplinary competence. Said differently, if competences of environmental psychology and physical planning were given meaning in

relation to a defined collaborative task, practitioners holding the competence would become increasingly committed to spend more time in the collaborative task, not only on tasks within the groups. Committing to collaboration is, according to Ansell and Gash (2008), crucial for a successful collaborative process. The National Transport Plan (NTP), 2018-2029, states that achievements with regards to the zero-growth target depend on extensive commitment between actors at different levels and across sectors (St. meld. nr. 33 (2016-2017)). Even though the practitioners in my study are not spread out on levels or sectors, commitment appears as a decisive factor that challenges prerequisites for closer collaboration.

In the practice of increasing the cycle share, the bicycle planners and mobility managers do not appear to directly depend on each other. That is, they are not so dependent on each other that they have initiated or committed to closer collaboration. This bears resemblance to Ansell and Gash (2008), who find that high interdependence among stakeholders is more likely to enhance commitment to collaboration. Commitment, they say, is also related to the original motivation to participate in collaborative governance. These aspects of interdependence and motivation bring me to critically discuss the engagement for collaborative governance.

At the beginning of this paper I referred to the definition of collaborative governance as processes and structures in which people cross boundaries to carry out purposes that could not be accomplished separately (Emerson *et al.*, 2011). Huxham (2003), who is an advocate for collaboration, reports that it is highly resource-consuming and often painful to make collaboration work effectively. Unless the potential for collaborative advantage is clear, he argues, it is generally best to avoid it. While this sounds pessimistic at the end of the study at hand, Huxham (2003) also notes that collaborative advantage can come in non-obvious forms and may be concerned with the process of collaborating rather than the actual output. For example, “the advantage may come from the development of a relationship with a partner rather than through achieving the substantive aims of the collaboration” (Huxham, 2003, p. 421). This bears resemblance to the analytical results of the study at hand. The relationship between the practitioners is characterised as respectful and open. The advantages of collaboration may come from the relationship that allows the practitioners to share information and knowledge. At the same time, following Shove *et al.* (2012) changes in either of the elements of meanings, materials and competences or the links between them, can induce changes to the practice, including, the relationship between the practitioners. Therefore, if prerequisites for closer collaboration lay in the relationship itself, it should not be taken for granted. Following Huxham (2003), those who want to make collaboration work, need to engage in continuous and permanent nurturing processes.

The results in this study are based on qualitative research within one workplace of bicycle planners and mobility managers in a Norwegian municipality who aspire to meet the governmental zero-growth target and increase the cycle share. The practitioners are sitting in the same room, and it is implicit that they should be able to make use of each other. Even though I have only studied one workplace, I still think that my findings could be extended to other workplaces where one wants to solve wicked problems based on interdisciplinary work methods. For anyone looking for knowledge and experience in collaborative dynamics in an interdisciplinary practice, my study contributes with understanding of how collaboration can function, what may facilitate for closer collaboration, the challenges one can experience and what makes it difficult.

7 Conclusion

This study has been written in the context of the governmental zero-growth target and increasing the cycle share of all travels in Norway. Collaboration between different actors is commonly understood as decisive in building infrastructure and cycle culture. Strand *et al.* (2015) and Spotswood *et al.* (2015) promote that physical and social factors should be dealt with together more than what has been the case in bicycle policy and planning so far. Together, the call for collaborative governance and the challenge to view physical and social factors together, encouraged the research questions: *What is characterising the practice in terms of meanings, materials and competences? What prerequisites for closer collaboration can be identified for the practice to meet the goal of increasing the cycle share of all travels?*

The study has dealt with a practice of bicycle planners and mobility managers in a Norwegian municipality, who aim to increase the cycle share and meet the zero-growth target. By focusing on collaboration, the study finds that this practice is characterised by meanings of making cycling easy and safe, and benefits and challenges of being an interdisciplinary workplace. The bicycle planners and mobility managers say they work with different things and do not collaborate much. For the material element, the study found that the practice is characterised by shared information, workspace and meetings. These aspects are found to be important to keep the practitioners updated on each other's work. In addition, the study demonstrated that competences of the practice are characterised by abilities to ask and transmit knowledge, and knowledge to plan and build bicycle infrastructure and change behaviour.

The practitioners' relationship and shared aspirations stand out as prerequisites for closer collaboration for the practice to increase the cycle share of all travels. People, with different work tasks and backgrounds, are principally able and motivated to engage in closer collaboration. The shared office space and ability to transmit competence and information are prerequisites that ensure capacity for joint action. At the same time, the study indicates that today's capacity for joint action is limited to sharing information and keeping each other updated. Without committing to collaborative projects beyond the group-based frames of bicycle planning and mobility management, the limited capacity for joint action indicates that closer collaboration is challenging.

This study has provided a deeper insight into a practice where practitioners holding different work tasks would like to collaborate more. Although the study is based on a small group of practitioners, I hope that the elemental approach of meanings, materials and competences has provided valuable insight for anyone looking for strategic collaborative interactions. By viewing bicycle planning and mobility management together, this study is also a contribution to an increased need to see physical and social factors together in bicycle policy and planning. Taken together, greater efforts are needed to ensure that planning and policy practices deal with physical and social factors together at all organisational levels. A key management priority should be to enable practitioners working with physical and social factors, to consider the knowledge they rely on and engage in closer collaboration.

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