Balancing Safety in Everyday Work

A Case Study of Construction Managers' Dynamic Safety Practices

Jeschke, Katharina N.

COPENHAGEN BUSINESS SCHOOL
SOLBJERG PLADS 3
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DANMARK

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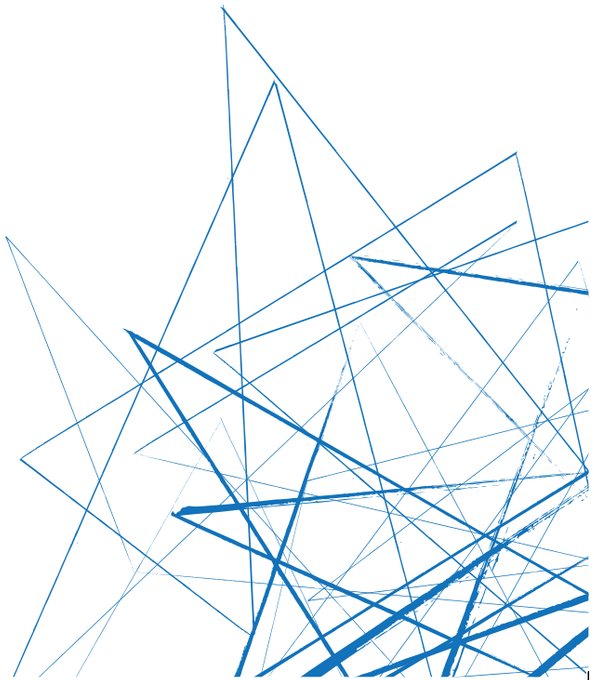

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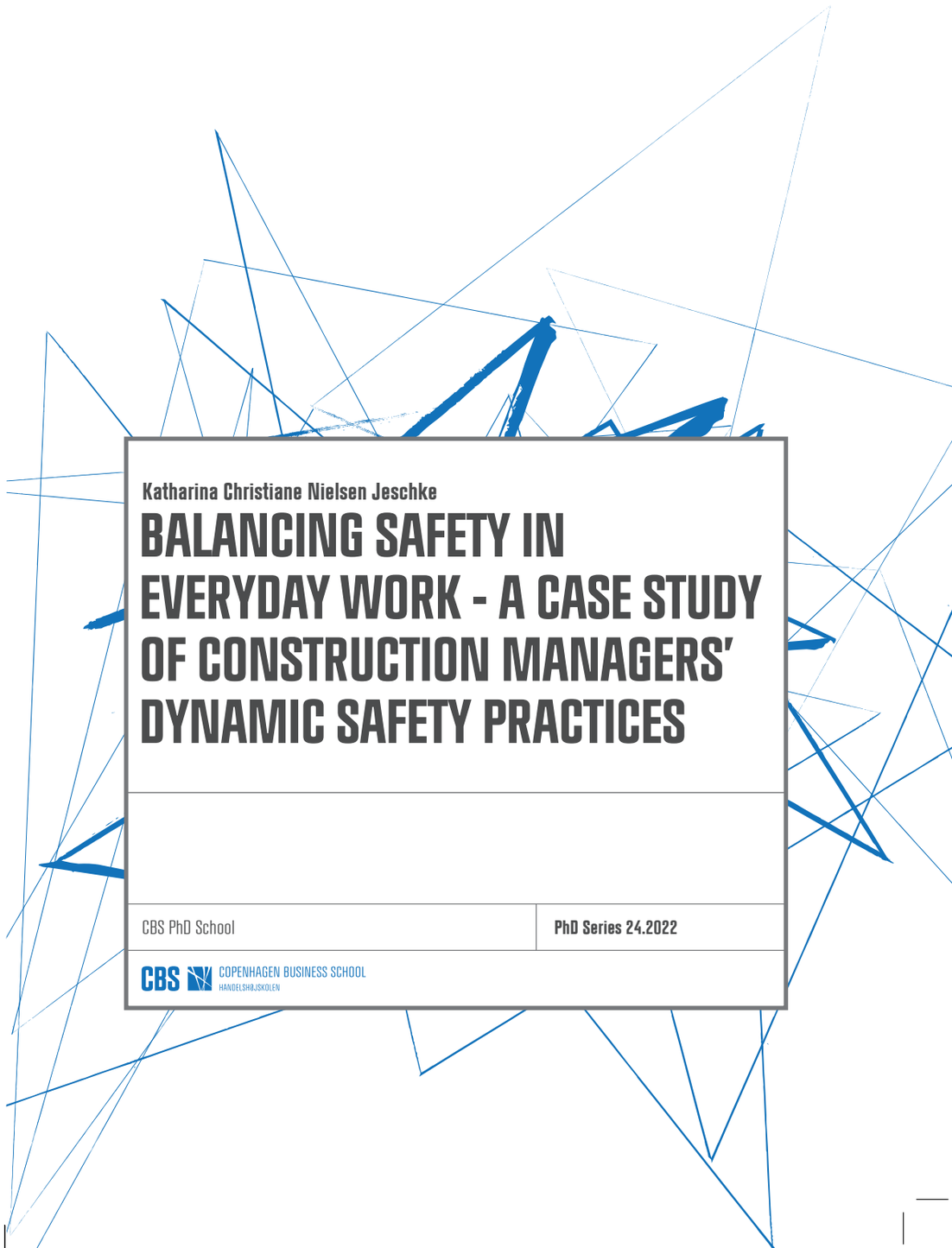

Katharina Christiane Nielsen Jeschke

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HANDELSHØJSKOLEN

Balancing Safety in Everyday Work

A case study of construction managers' dynamic safety practices

PhD dissertation

Katharina Christiane Nielsen Jeschke

Department of Organization
Copenhagen Business School

and

Division of Safety Research
National Research Centre for the Working Environment

Supervisors

Susanne Boch Waldorff, Copenhagen Business School

Morten Thanning Vendelø, Copenhagen Business School

Johnny Dyreborg, National Research Centre for the Working Environment

Katharina Christiane Nielsen Jeschke
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Katharina Jeschke, Copenhagen, 22 April 2022

Abstract

The construction industry continues to have one of the highest risks of occupational accidents and injuries, and the fields of occupational safety and safety management have been characterized by an understanding of safety as being in direct competition with other organizational goals and thus applying an 'either-or' mindset. This dissertation is based on eight months of ethnographic inspired fieldwork including observations, interviews and documentary data obtained from managers at three construction sites in Denmark. Focus is on the managers' daily safety practices by exploring how they integrate safety into their daily operational work activities and the tensions they face in their pursuits of attaining competing goals and demands.

Given the constructivist nature of occupational safety, the three studies reported in this dissertation are informed by a process philosophy and practice-oriented thinking. They draw on the existing theoretical concepts of institutional logics, hybrid professionalism and boundary work that provide key insights into occupational safety as a fluid phenomenon that is part of everyday work activities, constructed by the managers themselves. Safety is conceptualized as a complex, emergent, and dynamic aspect of managerial work, and this dissertation demonstrates how the managers approach safety through the ongoing and dynamic balancing of multiple and often competing institutional logics in everyday work.

The first study investigates how construction managers balance competing demands in their everyday work and finds that they are able to bridge such competing demands through the discretionary use of three institutional logics - professionalism, production and regulation logics, and discerns the mechanisms that trigger the bridging of these logics.

The second study specifically addresses the managers' professional identities and examines how they position themselves as successful managers to capture their embedded motivations towards safety management. The study reveals that the managers struggle to combine conflicting identity configurations, and instead engage in a situated and dynamic (re)construction of their identities, which enables them to develop hybrid safety practices.

The third study investigates the managers' safety practices when accentuated in boundary interactions and explores the manager-worker relation and its implication for collaborative safety practices. It shows that the managers and the workers negotiate safety through the mundane practice of complaining, where safety issues can be a 'safe space' for professional disagreement. A typology is proposed consisting of four complaining mechanisms and their relational dynamics.

These findings provide novel insights into how actors on the ground balance safety in everyday work when facing multiple demands in an environment replete with complexity. In essence, the dissertation provides three main contributions. The first contribution addresses the theoretical discussions on the safety mainstreaming process identified in the literature on safety research and safety management by empirically showing how organizational actors enact complementarities between multiple and seemingly competitive logics at the micro-level. Based on a theoretical view of safety as happening through processes of ongoing practices, I discern the micro practices of bridging, positioning, and complaining that both influence competitive and cooperative relations among logics. Thus, managers enact safety management in a dynamic more flexible way by separating and reconnecting practices fluidly during their workday.

The second contribution builds on the main argument that in order to transcend the binary 'either-or' understanding of safety and, thus, to further integrating occupational safety into other organizational goals, it is essential to focus on the dynamic relation between opposing elements rather than relying on just one element or the other. Thus, the dissertation advocates for a complimentary 'both-and' safety management strategy and concludes by calling for more empirical studies exploring and creatively applying the institutional logics perspective within the fields of occupational safety and safety management to investigate the facilitative relations therein. Hence, I suggest a dynamic more flexible approach towards safety management (*The seesaw of safety management*) that complements existing understandings of safety management. Finally, the third contribution shifts attention to the role of construction managers' professional identities in the changing of safety management strategies. Although, managers can enact complementarities, and thus, integrate safety into other operational tasks, their professional self-understandings mainly constrained such integrative practices.

The dissertation calls for future research efforts that focus on the integrated nature of safety practice, and the value placed by managers on independence, discretion, and flexibility. To transform construction safety management into more dynamic and flexible approaches, organizational members may need allowance to enact safety more creatively.

Dansk resumé

Byggebranchen er kendetegnet ved et arbejdsmiljø med en betydelig risiko for at ansatte kommer ud for arbejdsulykker. Samtidig har forskning og praksis inden for sikkerhed og arbejdsmiljøledelse været præget af en forståelse af sikkerhed som værende i modsætning til andre organisatoriske mål, som dermed har bidraget til en 'enten- eller' tankegang. Der er således mangel på forskning i sikkerhed og arbejdsmiljøledelse der kommer ud over denne 'enten-eller' tankegang, og dermed får undersøgt hvordan disse tilsyneladende modsatrettede formål kan integreres i det praktiske arbejde på byggepladser.

Denne afhandling er baseret på otte måneders etnografisk inspireret feltarbejde, som inkluderer observationer, interviews og dokumenter indsamlet fra bygge- og projektledere på tre byggepladser i Danmark. Afhandlingens fokus er på ledernes daglige sikkerhedspraksis ved at undersøge, hvordan lederne integrerer sikkerhed i deres daglige operationelle aktiviteter og de spændinger, de møder i deres stræben efter at opfylde modsatrettede mål og krav.

I betragtning af arbejdssikkerhedens foranderlige karakter, kombinerer de tre studier denne afhandling er baseret på, en processuel videnskabsfilosofi med en praksisorienteret tænkning. De tre studier er baserede på eksisterende teorier om 'institutionelle logikker', 'hybrid professionalisme' og 'boundary work' ('grænsearbejde'), der giver vigtig indsigt i arbejdssikkerhed som et flydende fænomen, der er en del af hverdagens arbejdsaktiviteter, betinget af den konkrete byggeopgave og af bygge- og projektlederne selv. Sikkerhed forstås derfor i denne afhandling som et komplekst, emergent (fremvoksende) og dynamisk aspekt af ledernes arbejde, og denne afhandling demonstrerer, hvordan sikkerheden håndteres gennem den løbende og dynamiske afvejning mellem flere og ofte konkurrerende institutionelle logikker i deres daglige arbejde.

Det første studie undersøger, hvordan bygge- og projektledere balancerer modsatrettede krav i deres daglige arbejde ved at trække på tre institutionelle logikker – 'professionalisme', 'produktion' og 'regulering' - og herved identificerer studiet de mekanismer, der understøtter hvordan lederne etablerer 'brobygning' mellem disse logikker. Studiet viser således, at lederne er i stand til at bygge bro over (tilsyneladende) konfliktende krav i deres arbejde, ved at gøre brug af deres professionelle dømmekraft i den konkrete praksis.

Det andet studie undersøger specifikt ledernes faglige identitet og belyser hvordan lederne positionerer sig som succesfulde ledere, og får derved vist ledernes motivation for arbejdsmiljøledelse. Studiet viser endvidere, at lederne har svært ved at kombinere modstridende

identiteter og i stedet engagerer sig i en situeret og dynamisk (re)konstruktion af deres identiteter, som gør dem i stand til at udvikle hybride sikkerhedspraksisser. Eller sagt på en anden måde, de bøjer de identiteter de bærer rundt på og tilpasser dem til den konkrete situation, for at kunne løse et bestemt sikkerhedsproblem.

Det tredje studie undersøger ledernes sikkerhedspraksisser, der fremhæves i de interaktioner der er på tværs af professionelle grænser, og undersøger leder-medarbejderforholdet og dets implikationer for fælles sikkerhedspraksisser mellem ledere og bygningsarbejdere. Det konkrete studie viser, at lederne og arbejderne bl.a. forhandler sikkerhed ved at brokke sig, samt at sikkerhedsproblemer, paradoksalt nok, kan være et 'safe space' for faglig uenighed. Der foreslås en typologi bestående af fire brokkemekanismer og deres relationelle dynamikker, og deres betydning for at løse praktiske sikkerhedsproblemer.

Disse resultater fremmer vores forståelse af, hvordan medarbejdere og ledere i praksis balancerer sikkerhed i det daglige arbejde, når de står over for uløste problemer i et miljø fyldt med kompleksitet og modstridende krav.

Afhandlingen har tre hovedbidrag. Det første bidrag adresserer teoretiske diskussioner om sikkerhedens integration i det daglige arbejde indenfor forskningen i sikkerhed og arbejdsmiljøledelse. Afhandlingen viser empirisk hvordan byggeledere praktiserer et kooperativt forhold mellem flere og ofte modstridende krav på mikro-niveau. Baseret på en teoretisk forståelse af sikkerhed, hvor sikkerhed udfolder sig gennem løbende praksisser på arbejdspladsen, identificeres der tre mikro-praksisser - *bridging, positioning* og *complaining* – som både påvirker kooperative og konkurrerende forhold mellem kravene. Således praktiserer byggeledere sikkerhed og arbejdsmiljøledelse på en fleksibel måde i løbet af deres arbejdsdag.

Det andet bidrag bygger på hovedargumentet om vigtigheden i at overskride den binære 'enten-eller'-forståelse af sikkerhed i forhold til andre mål i arbejdet, for yderligere at kunne integrere arbejdssikkerhed med andre organisatoriske mål. Her påpeger afhandlingen vigtigheden af at fokusere på *forholdet* mellem de modsatrettede mål, frem for kun at fokusere på det ene eller det andet mål. Afhandlingen advokerer derfor for en komplementær 'både-og' arbejdsmiljøledelsesstrategi. Den konkluderer med at opfordre til flere empiriske studier, der undersøger og kreativt anvender teorier om 'institutionelle logikker' inden for forskningen om sikkerhed og ledelse for at undersøge de produktive relationer, der kan være mellem modstridende krav i arbejdsmiljøledelse. Således foreslås der en fleksibel og dynamisk tilgang til sikkerhed og

arbejdsmiljøledelse (Arbejdsmiljøledelsesvippen). Afhandlingens tredje bidrag fremhæver den rolle som byggelederes professionelle selvforståelser spiller i forhold til at ændre arbejdsmiljøledelsesstrategier. Selvom byggeledere er i stand til at bygge bro mellem modstridende krav, og dermed integrere sikkerhed i deres daglige arbejdsopgaver, så hindrer deres professionelle selvforståelser sådanne integrative praksisser.

Afhandlingen peger således på behovet for at forskning i sikkerhed og arbejdsmiljøledelse fokuserer på at sikkerhedspraksis i sin grundlæggende natur er integreret med andre mål på arbejdspladsen, og at den værdi, ledere lægger på uafhængighed, diskretion og fleksibilitet i udformningen af deres sikkerhedspraksis, er et vigtigt element i denne integration. For at udvikle arbejdsmiljøledelsen inden for byggebranchen hen imod mere dynamiske og fleksible tilgange, kan ledere, og medarbejdere, have brug for at kunne håndtere sikkerhed ved brug af mere kreative løsninger, og i nogle tilfælde mindre regelbundne løsninger.

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Preface

This dissertation is based on three individual papers. I have presented earlier versions in different forums, and here, I present the details and processes of each paper.

The paper 'Understanding How Managers Balance the Paradoxical Nature of Occupational Safety Through a Practice-driven Institutional Lens' (paper 1), single-authored, has been published in *Safety Science* in March 2022.

The paper 'Developing hybrid managerial practices: Managers' professional identities and their impact on safety practices in the construction industry' (paper 2), co-authored with Susanne Boch Waldorff, Morten Thanning Vendelø and Jeppe Z.N. Ajslev, is currently unpublished. However, the abstract of the paper is accepted for presentation at the *Working on Safety* (WOS) conference in September 2022. I will submit the full paper to be reviewed for publication in a special issue in the corresponding journal *Safety Science*. I presented an earlier version at the European Group for Organizational Studies (EGOS) PhD workshop, held online in July 2021.

The paper 'Complaining about occupational safety and health: a barrier for collaboration between managers and workers on construction sites' (paper 3), co-authored with Susanne Boch Waldorff, Johnny Dyreborg, Pete Kines and Jeppe Z.N. Ajslev, has been published in *Construction Management and Economics* in June 2021.

1. Introduction

> *[Safety] is not an easy task. That's why I'm saying, 'Well, I'm trained to build. I just want to build so somebody else has to take this headache.' (Site manager)*

Ensuring occupational safety in contemporary workplaces is not an easy task, especially for employees that may not have a special affinity with safety and health at work. For instance, construction managers on construction sites perform production-related activities as these lie at the core of their education, career path, and normative orientation (Löwstedt & Räisänen, 2014; Styhre, 2011). Although construction managers may lack 'institutional closeness' to the institutional field of safety and health (Uhrenholdt Madsen, 2017, p. 154), they must still work with safety and health-related issues which are to be integrated in the company's other organizational processes (Hasle, Seim, & Refslund, 2019; Uhrenholdt Madsen, 2017). Hence, construction managers' work is characterized by multiple demands such as ensuring organizational productivity and economic efficiency but also their subordinates' safety and health[1], which leads to daily struggles as these demands may be competing and even paradoxical (Hu, Casey, & Griffin, 2020). The above quotation encapsulates the phenomenon investigated in the study reported in this dissertation: how do construction managers integrate safety into their daily operational work activities when facing multiple and often competing demands, and what are the implications of this for managers' safety management.

Despite an increased understanding of the apparent organizational and financial advantages of prioritizing safety (Hasle, Uhrenholdt Madsen, & Hansen, 2021; Pagell, Johnston, Veltri, Klassen, & Biehl, 2014; Sousa et al., 2021), and thus, the increased integration of safety management into central organizational processes (Hasle et al., 2019; Uhrenholdt Madsen, 2017), there are still major challenges of safety management within organizations. Occupational incidents and accidents[2] are still commonplace in contemporary workplaces (ILOSTAT, 2020), as the scenario below shows.

[1] While working environment is the term used in Denmark and in the other Scandinavian countries, *occupational safety and health* (*OSH*) is the term used in the rest of the world. Both concepts are used in the scientific literature. In this dissertation, I focus only on occupational safety at construction sites (excluding property and environmental safety and occupational health) and use the term interchangeably with *safety*.

[2] Both *occupational accident* and *occupational injury* are the terms used in the scientific literature. However, the use of the term *accident* has been long debated (see, for example, the discussions within the British Medical Journal) because it can be understood as unpredictable and therefore unavoidable. In this dissertation, however, I use *accident*, which I understand as physical or mental harm that occurs after a sudden event, such as a carpenter getting a finger cut off in a machine. Therefore, accidents are actually predictable and preventable.

> It's 9:40 a.m. The shared onsite office is quiet as most of the site managers are making their rounds. Suddenly, [foreman's name] comes running into the office, asking for the safety manager and telling him that one of the workers has been hit by a heavy load while working on the roof, and that the worker's leg is broken. In the background, I hear the alarm from the ambulance. The other workers at the site stop their work and observe what's happening. They look worried. *(Field notes, April 10, 2018)*

Keeping a high level of safety at construction sites is essential because occupational accidents are preventable and besides their obvious human consequences, such accidents result in great economic costs for both companies and societies in terms of lost workdays, lost productivity and healthcare and compensation costs.

The study reported in this dissertation is empirically anchored within the Danish construction industry, because construction is still among the sectors that reports the highest number of occupational accidents in relation to the number of employees (Arbejdstilsynet/Danish Working Environment Authority, 2021), which has been one reason to choose this sector for empirical investigation. Worldwide, the construction, agriculture and transportation sectors have the highest mortality risk from occupational accidents (Melchior & Zanini, 2019). In developed countries, safety within the construction industry has been improving over the last few decades (Lingard & Wakefield, 2019). For example, the rate of fatal accidents in Denmark in 2013 was only half of that in 1979, when about 80 people died in such accidents per year (Dyreborg, 2016; Nielsen & Carstensen, 2016). However, in 2018, European workplaces were still marred by 3,332 fatal accidents, one fifth of which took place within the construction sector (EU-OSHA, 2018), and there were still 10 fatal accidents involving construction workers in Denmark in 2020 (Arbejdstilsynet, 2021). Considering that the construction industry is one of the most dangerous industries in the world and that deaths from accidents in such industry can be avoided, the aforementioned high number of accidents indicate negligence and pose questions of equity (Oswald, Sherratt, & Smith, 2019). Risks to the individual workers' safety can be seen as unfair when such workers are under pressure to meet productivity targets. In the case of the construction of the 2022 FIFA World Cup stadium in Qatar, the risks to the workers' safety even became linked to migrant labor exploitation, a politically contentious and strongly debated issue (Pattison, 2020).

In contrast, the reported non-fatal accident rates within the Danish construction industry seem to have remained unchanged over the last four decades (Lander & Lauritsen, 2012; Lander, Nielsen, & Lauritsen, 2016; Lander, Nielsen, Rasmussen, & Lauritsen, 2014; Nielsen & Carstensen, 2016). The level of work-related diseases in Europe has also remained at the same level over the last 10 years (EUROSTAT, 2020). In 2020, 316 accidents and additionally 69 accidents with a high severity (expected three weeks absence from work) per 10.000 employees were reported within construction (Arbejdstilsynet/Danish Working Environment Authority, 2021). Thus, employees working in construction, especially workers have a very high risk for an occupational accident. At the same time, the industry scores very low when it comes to the prioritization of occupational safety and health at work, and its managerial engagement (i.e., management encourages to always work safe), because 44% of all companies either ignore (36%) or react passively (8%) towards risks that are linked to work (Dyreborg, Thorsen, Laursen, & Villadsen, 2021). Although, safety research has highlighted the role of managers' prioritization of safety in their work and communication to strengthen formal collaborative safety structures (Nielsen, 2008), and safety improvements (Grill et al. 2019; Kines et al., 2010; Zohar, 2003; Zohar & Luria, 2003); only 31 % of all Danish companies have an estimated proactive engagement towards safety (Dyreborg et al., 2021), which has been another reason to choose this sector for empirical investigation.

Several studies have suggested that the accident rates have now 'plateaued' (Sherratt & Ivory, 2019, p. 2519) and reached a level at which the established approaches to onsite safety management are unable to support further improvements. Lingard and Wakefield (2019) point out that 'the ways in which construction workers are injured and killed are remarkably similar and have changed little over recent years' (p. 3). Thus, we already know what kinds of activities and incidents result in people being injured or killed. However, the consistency with which these known incidents and accidents still influence construction workers implies that we may not know the underlying more complex processes and mechanisms influencing these incidents and accidents at construction sites.

Recent reviews of safety prevention measures (Dyreborg et al., 2008, 2013; Dyreborg et al., 2015, 2022) have shown that structural safety measures focusing on technical modifications (e.g., elimination, substitution of dangerous technologies and engineering) and organizational systems (e.g., work process design) are most important for reducing incidents and accidents at work. Thus, some of the most effective ways of controlling construction safety risks may lie in the better deployment of advanced technologies (Lingard & Wakefield, 2019). However, incidents and accidents may remain or even become more complicated because, for example, of multiple work

interfaces, such as the contractor–subcontractor one (Lingard & Oswald, 2020). Especially, the construction sector is a project-based sector, whereby temporary project organizations are formed from a combination of different stakeholders and a plethora of subcontractors and suppliers. Challenges for construction organizations at the interfaces between such different subcontractors have been well documented previously (e.g., Al-Hammad, 2000; Pavitt & Gibb, 2003).

In spite of many years' effort, it is difficult to prove substantial improvements of safety and health (Hämäläinen, Leena, & Takala, 2009; Hasle, Limborg, Grøn, & Refslund, 2017; Isusi, 2020; Milczarek, Schneider, & Gonzalez, 2009; WHO/ILO, 2021). For instance, an international Cochrane review of safety interventions' effectiveness for preventing construction worker injuries found a poor evidence base (van der Molen et al., 2018). Research has stated that occupational safety and health legislation plays an important role (Mischke et al., 2013) but pinpoint the gap between legislation and its implementation due to mal-coordination of authorities, under-resourced inspectorates, and workplace conditions that limit worker representation (see, e.g., Hasle et al., 2017; Walters et al., 2011). However, even in the case of strong legislation and resources for inspections, which is the case in Denmark, there is no clear evidence that this improved safety (Hasle et al., 2017). Dyreborg et al. (2022) show in their latest review of safety prevention measures that legislation has a limited to moderate effect on workplace safety; its enforcement however has only a little effect. Other scholars pinpoint that current safety knowledge is not translated and implemented into organizational practice (Dyreborg, Gensby, Limborg, & Pedersen, 2020; Malmros, 2018), which reduces workplaces capacity to take informed decisions and handle safety (Hasle, Limborg, & Nielsen, 2014). Consequently, the construction industry is now looking for alternative ways of managing safety at construction sites and requires better implementation and translation of research results into organizational practice (Baker, Chang, Bunting, & Betit, 2015; Schulte et al., 2017).

This suggest that greater attention is needed to understand the practical realities of implementation within organizations, indicating that knowledge is far from being transferred easily into practice. Simultaneously, safety is increasingly seen as a key operational and strategic concern of business organizations (Zanko & Dawson, 2012). In Denmark, a process of 'mainstreaming' safety efforts has been noticed (Hasle et al., 2019), in which various safety tasks become more segmented into other staff departments inside the organizations (Uhrenholdt Madsen, Hasle, & Limborg, 2019). Both this mainstreaming process and corresponding regulatory developments that 'orchestrate' stronger collaborations between different safety and labor market stakeholders (Hasle et al., 2017; Kamp & Koch, 1998; Koch, 2002) have moved safety from the so-called 'sidecar' position (Frick, 1994) to be

more mainstreamed into operational processes inside Danish organizations. This has certainly led to a better integration of safety into day-to-day operations of organizations (Hasle et al., 2019; Uhrenholdt Madsen, 2017).

However, as my initial quote encapsulates, these mainstreaming processes can have unintended consequences as organizational actors from outside the safety and health field, such as construction managers, have to carry them out. Thus, integration efforts paradoxically may lead to the risk of 'atomization' of safety and health tasks within organizations (Uhrenholdt Madsen et al., 2019, p. 360). Thereby, individual actors without safety as their main concern handle safety, but may lack safety-related knowledge, resources or even dislike the task. So, we know very little about how individual actors within organizations (i.e., actors who have not safety as their main concern) handle these integration processes in their day-to-day work, which constitutes a gap in the existing safety research literature. Here, interdisciplinary understandings, for instance approaches from organization studies, should begin to inform the development of safety interventions (Uhrenholdt Madsen, 2017; Pink et al., 2016), but also our understandings of safety management. Applying such approaches from organization studies will enable safety scholars to create a more detailed understanding of the interplay between organizational processes and policies and organizational actors' safety practices.

Thus, the underlying mechanisms of incidents and accidents may be complex and diverse, and this dissertation addresses the practical realities involved in construction managers' daily work activities within organizations. This study was an attempt to contribute new insights on occupational safety and safety management by improving the understanding of the multiple institutional and organizational demands encountered by construction managers, and the dynamic ways in which they attempt to integrate safety in their day-to-day work.

Working as a former research assistant and now a PhD fellow at the National Research Centre for the Working Environment (NRCWE), I obtained the privilege of entering the world of construction sites, which was hitherto unknown to me. I became part of an earlier intervention study, which required me to address foremen. I came to appreciate the rich stories of the study participants' lived work experiences, including the accidents they had encountered and their work conditions. Their stories made me understand construction work better and thus encouraged me to contribute to a safer and longer work life for the people working at construction sites. During my fieldwork, I met numerous managers who voiced their opposition to safety-related work tasks for them, like the site manager in the aforementioned quotation, as they lack resources to meet such seemingly competing demands of

production and safety. Thus, I studied managers' daily safety-related work activities as they unfolded in practice, such as the ones described below.

> *I would never run away from someone who's potentially in danger, but if they [workers] walk on an access footpath on the way to their hut to have lunch and they do not wear their safety glasses while doing so, it isn't I who will stop them. (Site manager)*

> *We are under a lot of pressure right now […] so sometimes I have to think, 'Is it important right now [stopping] this man standing here and cutting with a machine and dusting the entire place, if it's only himself? If three other men worked there, then I'll think it isn't fair to them … but if it's just one man…. This man has to be done and I know he will be done in just a few hours. (Site manager)*

The above quotes show that construction managers undertake actions and make decisions that are unsafe, especially when working, for example, under production pressures and small profit margins (Oswald et al., 2019). Such managers thus handle their daily safety activities in their own ways, by making personal judgments that they deem appropriate in such situations, as shown by the field notes below.

> *Construction manager X does the daily inspection round and meets three workers on the roof. They are cutting ventilation channels (made of tinplate) into big pieces so the channels will fit together. One of the workers is not wearing a helmet. During their conversation, the worker gets his helmet and puts it onto his head without saying anything. The manager does not mention anything either and keeps on talking about the work task. We keep walking and the manager starts to explain that he is aware that some workers do not wear their helmet but he chooses not to say anything about it. 'The worker got his helmet without my telling him … because this guy knows.' (Field notes, March 13, 2018)*

Although such managerial safety practices may also affect workers' occupational health and well-being, it is more difficult to uncover the more hidden nature of health compared to the visible concurrence of safety, and so I focused on occupational safety at construction sites (used interchangeably with the term *safety*) in my study. Occupational illness, however, is a very significant problem in the construction industry (see, for example, Lingard & Wakefield, 2019).

In the next section, I first present the current scholarly literature on occupational safety (and health) management in organizations. I describe how safety science and research in safety management have approached occupational safety during the last decades, focusing on three current trends in the scholarly debate within safety management. Then, I discuss these three approaches and reflect upon their limitations.

Literature: Occupational Safety and Safety Management in Organizations

Occupational safety is a multi- or interdisciplinary field of research (Aven, 2014), but this interdisciplinarity and its implications for research have not yet been fully explored (Pink et al., 2016). Safety research is often related to the study and prevention of accidents, but often the risk of other health injuries is included, thus, safety management in organizations will also encompass health risks. The term used will often be either 'safety and health' or 'health and safety'. As mentioned earlier, I focus only on occupational safety at construction sites (excluding property and environmental safety and occupational health). Safety science scholars define safety mainly as '[…] the condition whereby unexpected events, such as accidents and incidents, are being avoided' (Li & Guldenmund, 2018, p. 95). Hence, when comparing safety with safety management, the former refers to a state or situation, whereas the latter is a process or a series of certain activities. Thus, 'safety management is the process to realize certain safety functions' (ibid., 2018, p. 96), such as protecting employees from unacceptable risks. I have chosen to use safety and safety management interchangeably with occupational safety and occupational safety management.

In recent years, safety scholars have applied a number of conceptual models providing varying theoretical perspectives for understanding occupational safety and to guide empirical research (see, for example, Beus, McCord, & Zohar, 2016). Traditionally, safety has been viewed as an objective property of a technical system, and safety management has been viewed as a technical activity in which safety risks can be measured through formal risk quantification and can be addressed by specifying risk control measures (Oswald, Sherratt, Smith, & Hallowell, 2018; Sherratt, 2016; Zou, Sunindijo, & Dainty, 2014). In this view of safety, workers are regarded as having limited competence and a high propensity for error. Hence, accidents are seen as shaped by the activity of people that 'either trigger an accidental flow of events or divert a normal flow' (Rasmussen, 1997, p. 184). As a result, it is assumed that workers' behavior needs to be controlled through the establishment of prescriptive action rules (Dekker, 2003). These rules are context free, developed by technical experts and enforced by management (Hale & Borys, 2013b).

In contrast, Rasmussen (1997) proposed that the exclusively technical understanding of accidents focused on human error and violation be replaced with a social understanding of accidents focused on 'reasons' (p. 206). In this perspective, safety and safety management take place in a social field, where safety is interpreted and given importance in competition or interaction with other areas of attention. As a result, safety is viewed in the context of direct interaction with a dynamic and fast-paced work environment replete with uncertainty in which people continuously make adaptive modifications to their behavior as part of their normal work (Rasmussen, 1997). In this perspective, organizational action is based on the organizational members' perceptions and interpretations of safety and accidents, reflected for instance in the research on safety culture (see, for example, Gherardi, Nicolini, & Odella, 1998; Guldenmund, 2000; Hale et al. 2010; Richter & Koch, 2004), and the related area of safety climate (e.g., Clarke & Ward, 2006; Flin, Mearns, O'Connor, & Bryden, 2000; Fuller & Vassie, 2001; Zohar, 1980). Research in safety culture and climate have proved clear relations between culture /climate and accidents, and methods have been developed to enhance safety culture (e.g., Kim, Rahim, Iranmanesh, & Foroughi, 2018; Vierendeels, Reniers, van Nunen, & Ponnet, 2018). Sociotechnical systems thinking (Le Coze, 2015; Rasmussen, 1997) and safety culture (Guldenmund, 2000) are both applied widely in safety science and include the work context in their propositions, which is highly relevant when discussing the interplay between individual responses and institutional and organizational demands (Le Coze, 2021). However, research in safety culture and climate often focus on what managers ought to do and does not account for the limited integration of safety into operational tasks. Thus, decoupling may remain unintended, as managers might find safety-related tasks to distant from their operational concerns (Uhrenholdt Madsen et al., 2019).

Another string of safety research is aimed at major risks related to for example power plants, chemical plants, and aviation. Here, the accidents in Three Mile Island, Seveso and Bhopal triggered extensive research in risk and prevention of major accident, for instance with Perrow's seminal book from 1984 (1984). Perrow focused on the complexity of systems and the tendency to ever-tighter couplings between parts of the organizations that could result in so-called 'normal accidents'. Hasle and Madsen (2021) pinpoint that Perrow's theory makes an argument 'against integrating safety into the mainstream of operations, as these invariably will fail and misfire' (2021, p. 2). However, normal accident theory has been discussed by scholars from the so-called 'high reliability organizations' (HRO) tradition, and in recent decades from the 'resilience engineering perspective' (Hovden, Albrechtsen, & Herrera, 2010) or Safety II as it is also known. In line with this thinking, several safety scholars point out that the capacity of human beings to act is not seen as a threat that has to be

controlled but as an asset to their adaptive capacities and a means of stopping and hampering system errors (Hollnagel, 2008; J. Reason, 2008). An insight from these studies is the acknowledgement that there exists a dynamic tension between production and protection. Goals of production (e.g., efficiency, profits, market growth) predominate in many organizations, often at the expense of safety (Hopkins, 1995; Perrow, 1984; Reason, 1997). These perspectives highlight the relevance to integrate safety efforts into the existing successful organizational practices that already exists. Besides these perspectives, also Hasle and Madsen (2021) argue recently for the beneficial relations between safety and operations management.

Research into the possibilities for the integration of safety and operations management has also appeared outside safety science, e.g., in human resource management (e.g., Appelbaum, 2000; Boxall & Macky, 2009) and operations management (e.g., Brown, 1996; Pagell et al., 2014). However, also studies within safety management research (e.g., Balfe, Leva, Ciarapica-Alunni, & O'Mahoney, 2017; Kontogiannis, Leva, & Balfe, 2017; Köper, Möller, & Zwetsloot, 2009) argue for the importance for safety and the integration with operations. Studies also look into facilitators and barriers to the behavior of stakeholders, in particular managers and safety professionals regarding safety (Callari, Bieder, & Kirwan, 2019; Grill et al., 2019; Provan, Dekker, & Rae, 2018) but these studies do not explain the origins of these facilitators and barriers.

Previous studies on safety at construction sites have suggested that the way safety is constructed and enacted at such sites is complex and influenced by a range of social relationships, interactions and voices (Dekker, 2015; Gherardi & Nicolini, 2002; Lingard & Oswald, 2020; Sherratt, 2016; Turner & Gray, 2009). Such an approach focuses on a more nuanced view of safety positions as 'situated, negotiated, generated and transplanted' in the historical, sociomaterial and cultural context in which work occurs (Turner & Gray, 2009, p. 1260), and turns away from a strong focus on safety through management and control. For instance, the aforementioned quotes reveal that construction managers adjust the safety management activities to everyday circumstances affected by multiple tensions, thus drawing, for example, on personal discretion instead of following a processual template. These perspectives acknowledge the differences between institutional knowledge and process and the embodied everyday practical knowledge of people that remains informal and unspoken (see, for example, Pink, Tutt, Dainty, & Gibb, 2010). To understand why people, work as they do, safety scholars have to examine their situated practice, their everyday tasks and how they experience and learn safety. As a result, safety research needs 'thick descriptions' (Geertz, 1973) of the lived social

practices of those involved in processes of operating, maintaining and integrating safety management in contemporary workplaces.

Thus, the study that I conducted and that is reported in this dissertation is positioned in the stream of ethnographic studies on safety at construction sites (see, for example, Baarts, 2009; Gherardi & Nicolini, 2002, 2006; Grytnes, Tutt, & Andersen, 2020; Löwstedt, 2015; Oswald & Dainty, 2020; Paap, 2006; Pink, Tutt, & Dainty, 2012; Thiel, 2012), focusing on how individual actors inside Danish organizations understand and enact safety in their everyday work, and thereby accounting for actors' agency, social relations with their peers and potential power dynamics.

In this study, I focus on the ways in which actors integrate safety into operational tasks within organizations. Despite the long tradition of safety (and health) regulation and organizational advantages with prioritizing safety (Hasle et al., 2019; Pagell et al., 2014), I claim that individual actors still struggle with integrating safety into their daily operational tasks and thus, separating both spheres remains a usual characteristic of construction safety management. Hence, in the following section, I review the literature on safety and its management comprising the multiple demands and struggles that both organizations and construction professionals face in the managing of occupational safety. I found the following three emerging trends (off course, there are different approaches and shadings in the actual research literature): 1) Integration of safety into daily operational tasks, 2) Atomization of safety tasks, and 3) Fragmented safety collaboration within construction (e.g., Grytnes et al., 2020; Hasle et al., 2021; Uhrenholdt Madsen et al., 2019).

1. Integration of safety into daily operational tasks

Recent studies within the safety literature encourage joint management system practices directed at both safety and operations (Hasle et al., 2021; Pagell et al., 2014; Tompa et al., 2016; Veltri et al., 2013), with beneficial effects for labor productivity and profitability (Lo et al., 2014; Sampaio et al., 2012; Fernández-Muñiz et al., 2009). Several studies have identified economic benefits of investing in risk control (e.g., Grimani et al., 2018; Lee, 2018). This set of ideas and empirical results shows that safety and operational practices are complementary or even synergistic (Pagell et al., 2014; Tompa et al., 2016; Veltri et al., 2013). Research has explored the developments of a tighter and more systematic integration of safety management into operations management (Hasle et al., 2019). This can be seen in various forms, for instance in certified management systems (Frick & Kempa, 2011; Hohnen, Hasle, Jespersen & Madsen, 2014; Madsen, Kirkegaard, Hasle, & Dyreborg, 2018) in

efficiency optimizing systems (Hasle et al., 2014, 2019), and in how human resource management concepts influence safety management (Kamp & Nielsen, 2013).

As mentioned in the introduction, a process of 'mainstreaming' safety efforts has been noticed in Denmark (Hasle, Seim, & Refslund, 2019). Hasle and colleagues (2019) studied 60 Danish companies and observed important changes in the employers approach to safety due to regulatory changes calling for more reflexive and integrative approaches to safety and health (i.e., introduction of the EC/1989/391 framework directive, 2010) (EU OSHSA, 1989). They show the development of safety from being a traditional organizational 'sidecar' (Frick, 1994) that points to a marginalization of safety issues from the general management of production, to being increasingly integrated in daily regular operations and main management decisions. Thus, safety is no longer a conflict issue or given priority because of employee demands but is treated as any other specific issue such as quality or human recourse management.

Besides this mainstreaming process, corresponding regulatory developments, such as the 'orchestration' strategy (Hasle et al., 2017; Kamp & Koch, 1998; Koch, 2002) have stimulated this development. Orchestration as a strategy pursues a stronger collaboration and coordination between the Danish safety and health authorities, the social partners (employers and unions), and the many other stakeholders in the field, mixing different policy instruments (Flanagan, Gregory, Hallisey, Heitgerd, & Lewis, 2011). It fits well with the Nordic context where collaboration and dialogue play an important role both in politics and the labor market (Dyreborg, 2011; Hasle & Sørensen, 2013; Rosness & Forseth, 2015). This has led to a better integration of safety into day-to-day operations of organizations (Hasle et al., 2019; Madsen, 2017).

However, despite these positive developments, many organizations still separate their lines of management for safety and operations (Shevchenko, Pagell, Johnston, Veltri, & Robson, 2018). Hasle et al. (2021) also recognize this tendency within research, such as between the research fields of safety and operations management. Besides the mainstreaming approach to safety, a substantial number of Danish organizations continue to have a 'sidecar' approach or carry out safety as ad hoc oriented activities with a lack of integration and lower priority to safety (Hasle et al., 2019; Sørensen et al., 2007). Additionally, the management of employees' safety touches upon core values and conflicts in modern capitalist societies and is embedded in inherent contradictions between the need for efficiency versus the need for employees' safety and health. For instance, studies have shown efficiency's negative effect on worker's health (Westgaard & Winkel, 2011) and how employees are torn between

productivity and safety (Brown, Willis, & Prussia, 2000). Safety managers are often placed on the side-lines of the decision process in relation to operational managers (Provan et al., 2018) and carry out activities inside their domain, which puts them in the sidecar position (Hasle et al., 2021) thus integration is still a challenge.

Although, safety research highlights proactive leading indicators to improve safety (Zwetsloot, Leka, Kines, & Jain, 2020), contemporary safety management approaches still rely mainly on lagging indicators, key performance indicators, risk assessment, bureaucratic measurement and accident investigations (Dekker, 2014), that view safety as being in direct competition with other organizational goals, such as efficiency or productivity (Rasmussen, 1997; Zohar, 1980, 2002). Such understanding of safety management applies a dilemma perspective or an 'either-or mindset' (Hu et al., 2020, p. 1), which may be considered problematic because it may reinforce separating safety from other organizational goals. As such, 'safety often loses the battle when a trade-off is required with project costs' (Oswald et al., 2019, p. 1) or when 'superiority' is given to operations management (Hasle et al., 2021, p. 1).

To expand our understanding of such separation and to conceptualize the difficulties of integrating safety with other organizational goals, the aforementioned shortcomings of safety research may be addressed with theoretical insights from organization studies, in particular studies of institutional complexity (Greenwood, Díaz, Li, & Lorente, 2010; Greenwood, Raynard, Kodeih, Micelotta, & Lounsbury, 2011). I am by fare not the first safety researcher who relies on a framework of institutional theory to show how occupational safety and safety management is institutionalized in Denmark and that the environment surrounding organizations shapes how safety is practiced in the respective industries and within the organizations (Dyreborg, 2006; Hasle et al., 2021; Madsen, 2017). I suggest leveraging the institutional logics perspective (Friedland & Alford, 1991; Thornton, Ocasio, & Lounsbury, 2012), which is more sensitive to how organizations are composed by multiple and often competing sets of expectations for behavior, and that organizational outcomes are contingent on how the balance between these sets of expectations is secured (Ocasio, Thornton, & Lounsbury, 2017). It also adds more focus on the organizational actors that are important interpreters of institutional logics into coherent organizational practice, which is relevant for analyzing how actors may balance such competing expectations or logics and handle the safety mainstreaming process.

Previous safety scholars have drawn on the theory of institutional logics to analyze the competitive relations between organizational and institutional demands. Institutional scholars have largely

emphasized the conflicts between competing logics and their representatives (Pache & Santos, 2010; Greenwood et al., 2011). Understanding safety through the lens of institutional logics provides a theoretical pathway for identifying local rationales and analyzing the complexities associated with them as there are distinct logics present in organizational contexts, each of which provides its own coherent rationale for enacting safety (Thornton & Ocasio, 2008). Within safety research, the institutional logics perspective was utilized in empirical analyses to study the fields of work environment management (Dyreborg, 2006; Madsen, 2017; Uhrenholdt Madsen & Waldorff, 2019), heat stress management (Jia, Rowlinson, Loosemore, Gilbert, & Ciccarelli, 2019), operations management (Hasle et al., 2021) and client and construction supervisor practices (Cornelissen, Van Vuuren, & Van Hoof, 2020; Lingard, Oswald, & Le, 2019). For instance, Madsen and Waldorff (2019) highlight the three existing institutional logics of advocacy, compliance, and commitment in the field of working management in Denmark that influence the way safety is managed in Danish companies. Likewise, Hasle et al. (2021) show conflicts between the two dominant logics of risk for safety management and efficiency for operations management that translate into differences in goals and rationales behind practices within organizations. However, Hasle et al. (2021) identified also potentials for additive constellations between the risk and efficiency logics driven by, for instance, the introduction of the OHSAS 18.001 (now ISO 45.001) standard pushing for joint management system practices. Here, the literature on organizational hybrids and hybridity (Battilana, Besharov, & Mitzinneck, 2018) may be fruitfully used to explore the facilitative relations between multiple demands, and to uncover how people may develop 'both-and management strategies' (Hu et al., 2020, p. 2; Lüscher & Lewis, 2008; Miron-Spektor, Ingram, Keller, Smith, & Lewis, 2018).

2. Atomization of safety tasks and actors' distance to safety management

Another trend in the current scholarly literature on safety management addresses the already above-mentioned risk of 'atomatization' of occupational safety management tasks (Uhrenholdt Madsen et al., 2019) within Danish organizations as an unintended consequence of the mainstreaming process (Hasle et al., 2019). The increasing integration of safety management into central organizational areas means that safety is folded into other organizational processes such as quality, environmental, or wider risk management processes (see, e.g., Hasle et al., 2019; Jain, Leka, & Zwetsloot, 2018; Madsen, 2017). This means also, that various safety tasks become more segmented into other staff departments inside the organizations and that organizational actors who belong to occupational communities other than the traditional safety and health field are increasingly in charge of parts of the safety efforts inside the organizations (Madsen, 2017). For instance, managers working in

construction perform production-related activities as these lie at the core of their education, their career paths and normative orientations stemming from within their occupational community. Hence, analyzing managers' professional self-understandings and underlying motivations towards safety integration may reveal co-existing local rationales that influence managers' practices. They may pursue their production and efficiency agenda, as they may not identify with safety-related tasks, but experience interruptions when accidents occur or when workers become dissatisfied with safety.

Safety research has often highlighted the role played by top managers/CEOs supporting both safety management and improvements (Fruhen, Mearns, Flin, & Kirwan, 2014; Tappura, Nenonen, & Kivistö-Rahnasto, 2017; Zwetsloot et al., 2017). Research has also investigated how people in the frontline of organizations are 'mindful' and aware of the potential threats that can occur in their daily work activities (e.g., Flin & O'Connor, 2013; Klockner, 2018; Weick & Roberts, 1993). Although, researchers agree that middle managers' actions are a valuable asset for organizations and central to pursuing key organizational outcomes (Glaser, Stam, & Takeuchi, 2016; Wooldridge, Schmid, & Floyd, 2008) we know very little about how middle managers take safety into account in their daily operations, and the challenges they face (Callari et al., 2019; Rezvani & Hudson, 2016).

So, how do construction managers approach safety in their daily work and what challenges do they face? Empirical research within the construction management literature points at managers' experienced contradictions and tensions as resources can be scarce due to the reliance on low-cost tendering and the resultant need for work to be carried out as quickly and cheaply as possible to return any profit for its participants (Sherratt, 2016). This occupational group sees work life as involving juggling multiple priorities, activities and problems, and feels that they are required to predict and prepare for future events (Davidson & Sutherland, 1992; Mustapha & Naoum, 1998; Styhre & Josephson, 2006). How construction managers and other construction professionals approach safety in practice also depends on what they value in their work and whom they identify with (Ajslev, Lund, Møller, Persson, & Andersen, 2013; Ajslev, Møller, Persson, & Andersen, 2017; Andersen, Karlsen, Kines, Joensson, & Nielsen, 2015; Andersen, Nørdam, Joensson, Kines, & Nielsen, 2018).

Previous studies on construction managers' professional identities have been relatively comprehensive, suggesting that such managers' identities are centered on being a 'construction worker' and are based on gendered ideas of masculinity, freedom and independent work (see, for example, Hayes, 2002; Löwstedt & Räisänen, 2014; Löwstedt & Sandberg, 2020; Ness, 2012; Polesie, 2013; Raiden, 2016; Styhre, 2011; Sveningsson & Alvesson, 2003; Thiel, 2012). In essence,

this empirical set of ideas points to construction managers' appreciation of their ability to 'craft their environment to suit their work-world and work-view' (p. 12).

The aforementioned identities are of importance for managerial practice (Bévort & Suddaby, 2016; Brown & Phua, 2011; Brown, 2015; Joffe & MacKenzie-Davey, 2012; Noordegraaf, 2007; Phua & Rowlinson, 2004). Several studies have shown how managers' communication and behavior affect workers' perceptions of safety procedures (Grill, Nielsen, Grytnes, Pousette, & Törner, 2019; Kines et al., 2010; Zohar, 2003; Zohar & Luria, 2003). Research has also shown managements engagement as important driver to secure safety improvements (Zwetsloot et al., 2017) and that managers' prioritization of safety strengthen the existing internal safety organization within Danish companies (Nielsen, 2008). Thus, developing an understanding of construction managers' self-conceived professional identities may yield insights into their motivation towards or resistance to integrating safety into other parts of their everyday work. However, safety research has so far overlooked the role of construction managers' professional identities in balancing conflicts associated with serving competing safety rationales, such as through identity transitions (G. Currie & Croft, 2015; Ibarra, 1999; Ibarra & Barbulescu, 2010; Pratt, 2000).

Thus, theoretical insights from the research on hybrid professionalism (Noordegraaf, 2015) and positioning theory (Davies and Harré, 1990) may help expand our understanding of managers' self-perceived identities and how these influence their safety practice. Research has shown how work environment has become mainstreamed in Danish companies (Hasle et al., 2019) and the study reported on in this dissertation, creates novel insights on how construction managers ensure safety in organizational operations. Research on hybrid professionals suggests that they are open to adopting some managerial duties and objectives alongside their professional ones (Denis, Ferlie, & Van Gestel, 2015; Mcgivern, Currie, Ferlie, Fitzgerald, & Waring, 2015; Spyridonidis, Hendy, & Barlow, 2015; Teelken, 2015), and previous research on professional engineers suggests that hybridity in such profession may not mean being combative (Adams, 2020; Bresnen, 2013; Brint, 1994; Lipartito & Miranti, 1998). As a result, the theoretical concept of hybrid professionalism may illuminate how managers may integrate safety into their daily work activities as part of their expertise and professional identity and likewise why they may experience struggles doing so.

3. Fragmented safety collaboration

A third trend in the current safety literature relates to collaborative safety practices between multiple stakeholders that are highly relevant for ensuring safety in project-based sectors, such as construction,

but difficult to maintain. Typically, temporary project organizations are formed from a combination of multiple stakeholders (client, contractor, subcontractors, designers, suppliers). Safety research has pointed out the construction industry's professional fragmentation (Fellows & Liu, 2012) and the inherent challenges posed by the differences in perspectives, goals and priorities in the complex work settings in such industry concerning what is and is not safe and how to achieve safety goals. Construction projects are replete with distinctions between different participants' knowledge claims, resources and practices; thus, safety knowledge is seen as something dynamic and diverse, and is sometimes contested (Pottier et al., 2003; Antonsen, 2009; Hale & Borys, 2013). As a result, several previous studies have recognized the importance of safety collaboration and have provided theoretical insights relevant for understanding manager–worker relations and their significance for safety practices (Ajslev et al., 2013; Andersen et al., 2015; Andersen & Grytnes, 2021; Grytnes et al., 2020; Paap, 2006; Thiel, 2012).

However, despite the Danish contexts tradition for collaboration and dialogue in politics and the labor market (Dyreborg, 2011; Hasle & Sørensen, 2013; Rosness & Forseth, 2015; Hasle et al. 2017, Kamp and Koch, 1998; Koch, 2002), safety collaboration between construction managers and workers has been described as conflicted (Grytnes et al., 2020). Such an 'oppositional relationship' (Andersen et al., 2015, p. 646) triggers questions regarding the mechanisms capable of fostering the development of more positive emergent conditions for safety collaboration, and makes an analysis of how distinctions and tensions are negotiated plausible. Yet, safety research lacks explanations of how occupational groups construct their boundaries and distinctions (Battilana, 2011; Bucher et al., 2016) and thereby purposefully influence such distinctions (Lamont & Molnár, 2002; Phillips & Lawrence, 2012). Here, the use of theories from the sociology of professions, such as boundary work (Gieryn, 1983; Langley et al., 2019), may help unpack occupational distinctions and capture managers' mundane safety practices. Additionally, it may be difficult to discern a detailed 'template' of professional rationales for enacting safety (Friedland & Alford, 1991; Thornton et al., 2012) when managers are on the 'business-as-usual' mode, but when their professional jurisdiction is under threat or under negotiation, such as when the occupational group of workers is complaining about a safety-related matter, situated practices emerge and reveal managers' understanding of safety.

Here, I argue that given the complex nature of both the construction project organizations and the practices and interactions that occur as a normal part of construction work, insights from organization studies and sociology of professions are appropriate to be drawn upon to support further improvements. Building on these previous relevant research efforts, I sought to expand the current

understanding of managerial safety practices and the multiple demands and mechanisms that influence construction managers' safety-related thinking, motivation, and professional practice.

Research Question

To provide the aforementioned broader understanding of managerial safety practices, the following main research question guided my inquiry:

> *How do construction managers integrate occupational safety into their everyday operational work when facing multiple institutional demands, and what are the implications of this for managers' safety management?*

The aforementioned main research question was operationalized into three separate research questions representing each of the three papers in this dissertation:

Paper 1: *How do construction managers beneficially combine competing institutional logics?*

Paper 2: *How do construction managers' professional identities influence their safety management practice?*

Paper 3: *In cross-boundary settings, where multiple groups interact, how do construction managers and workers negotiate their professional distinctions to enhance their safety collaboration?*

Thus, the main research question captures the content of my dissertation. It implies that construction managers are a key group of actors positioned within a complex and dynamic work setting replete with potentially competing institutional and organizational demands that influence their professional practice and identities and their relations with others. Current research knowledge points at the prevention of occupational accidents as a process of increased safety integration and highlights the difficulties to implement existing knowledge into organizational practice, which is why I focused on investigating actors' safety practices and their efforts towards safety within organizations. Thus, my theoretical framework was informed by diverse research traditions found within organization studies: research on the intersection of institutional logics and organizational hybridity as well as research on professions and their identities (Abbott, 1988; Battilana et al., 2018; Davies and Harré, 1990; Gieryn, 1983; Langley et al., 2019; Smets, Jarzabkowski, Burke, & Spee, 2015; Zilber, 2021). This allowed me to investigate how construction managers' ordinary work unfolds in practice at Danish construction sites. Thus, my study illuminated the underlying complex processes and mechanisms that influence how managers approach safety integration in their everyday work, and the struggles they experience.

Outline of Dissertation

In this first chapter of my dissertation, I introduce the research field of occupational safety and safety management, which I sought to contribute to through my study, and the key concepts used in this dissertation.

In chapter 2, I introduce the empirical field of safety and safety management at construction sites and outline how safety is regulated therein and the important role that construction managers play in such regard.

In chapter 3, I outline my key theoretical concepts by connecting them with the main subjects of the related scholarly conversations (i.e., the institutional logics perspective, professional hybridization, and boundary work in the field of occupational safety and safety management) to assemble my theoretical framework.

Chapter 4 presents the overall methodological considerations of my study and introduces my three empirical research settings and the related applied research methods.

In chapter 5, I outline the three separate papers making up my dissertation, and the core findings they report, each of which addresses my main research question from a different theoretical perspective.

In chapter 6 (Concluding Discussion and Contributions), I return to the overall research question, provide an answer to it based on the collective findings reported in the three individual papers, discuss my study's contributions from the theoretical and practical perspectives and suggest possible further research endeavors.

2. Empirical Field: Occupational Safety and Safety Management at Construction Sites

In the following section, I describe my empirical field of interest: occupational safety and safety management at Danish construction sites. First, I describe what the concept of safety entails for Danish companies, and how it is regulated, including a short presentation of the Danish labor market structure and its parties. Then I introduce the existing work conditions and safety-related challenges at Danish construction sites. Finally, I describe the individual actors involved in practicing safety, focusing on the occupational group of construction managers, particularly their relations to the empirical research context described here.

What Is Occupational Safety and How Is It Regulated in Denmark?

Occupational safety means safety from physical and mental harm and accidents at work and is only one feature of the broader Scandinavian conceptualization of the working environment, as mentioned above. Establishing a safe workplace to ensure that the employees are not harmed when at work is the duty of all organizations with employees in Denmark, both public and private (Beskæftigelsesministeriet, 2011). Denmark has had regulation on worker protection since 1873 and in 1913, Denmark got its first Factory Act aiming at prevention of occupational accidents and diseases from factory work (Arbejdstilsynet, 2022). In 1975, the working environment rules were centralized into a single Act – the Danish Working Environment Act was passed by the Danish Parliament and marks the beginning of when organizational responses went from being simple issues of following guidelines and comply with requirements, to being a complex governance issue where organizations must integrate safety tasks into their fundamental practices and strategies (Dyreborg, 2011). Since then, safety has evolved from being a peripheral issue dealt with by 'safety organizations[3]' and trade unions to being an increasingly strategic and operational issue integrated into the overall planning and decision making in Danish organizations, enabling more ownership of it by the employers and employees. Between the years 1975-2007, the increasing introduction of safety management systems (e.g., ISO 45001 certificate), key performance indicators, corporate social responsibility strategies and a focus on organizations' reputational risks have led to increased safety integration, even though the involvement of workers and ownership of safety issues, is not (at all) common practice in all companies (Dyreborg, 2011).

Safety and health have been integral parts of the so-called 'Danish model' of industrial relations and labor market regulations since the passing of the Working Environment Act, in line with traditions in other Nordic countries. The Danish regulatory framework for safety and health is characterized by corporatism and a tri-partite system of voluntary cooperative agreements between employer and employee associations, with the state as a mediating partner in negotiations of essential issues. Around 84% of all Danish employees are covered by a collective agreement (DA, 2014). Even though, there is no legislation on minimum wages there are framework legislations on issues including working hours and the internal organization of safety and health activities (Hasle et al., 2019). Correspondingly, the Working Environment Act secured the right to elect safety representatives, who had to be informed and involved in the control of safety and health issues. The

[3] In 2010 the name 'safety organizations' was changed to 'work environment organizations'.

specific Danish method was to establish a collaborative system consisting of safety and health groups (representatives and first line managers) at the local departmental level and joint safety and health committees at enterprise level. This internal so-called 'work environment organization' with election of its representatives and establishment of safety and health groups and committees were implemented in most of the Danish private and public organizations with more than ten employees (Sørensen, Hasle, & Navrbjerg, 2009).

Additionally, a high union density (Andersen, Dølvik, & Ibsen, 2014; Hasle & Sørensen, 2013) has marked Scandinavian countries. Unions and employers have developed a collaborative and trust-based approach in the Nordic countries, which has influenced the field of work organization as well as safety and health (Gustavsen, 2007; Jørgensen, 2002). This has led to a stronger local cooperation between employers and workers (Hagen & Trygstad, 2009) and a higher influence on work tasks (Gallie, 2009).Unions are also heavily involved in workplace cooperation aimed at improving work outcomes and thus making Danish firms competitive (Kristensen, 2003; Kristensen & Rocha, 2012).

During the last decades, Danish safety legislation has changed towards a more reflexive regulation. The most significant change came in 2010 with a higher level of self-regulation, where the full responsibility for a safe and healthy work environment is placed more explicitly on the employers (Hasle et al., 2019), and the requirements for a formal collaborative safety organization were more fundamentally reformed. The legislation still requires the establishment of a basic safety organization, but it is now much more flexible, and it is up to the individual enterprises to design a system suited to the context of their particular enterprises. It is still required to have elected safety representatives and there are still requirements for certain activities such as training of the representatives and first line managers, but otherwise there are only few demands for specific organizational forms. With the more reflexive legislation, there was also a change in wording from occupational safety and health to working environment organization.

Furthermore, there is a breadth of the institutional field surrounding the regulation that is filled with multiple actors. Employees, management, consultants, regulators, trade unions and employers' associations all playing their parts in managing and regulating the safety and health in Danish companies. Both the state authorities and non-state actors of labor market parties have the duty to advice organizations in their safety and health efforts, along with the authorities' duty to control these. The Danish Work Environment Authority carries out the direct task of regulating, controlling and supervising organizations.

During the last decade, there has been an important development of using increasingly certified management systems (Madsen et al., 2018). Since 1999, when OHSAS 18.001 (now ISO 45.001) standard of safety and health was published, more than 3000 Danish organizations have obtained a certificate to approve their internal safety management systems (Fabricius, Pedersen, Albertsen, & Limborg, 2015). The effects of safety management systems on the health and safety performance in companies are subject to some discussion in the scientific literature, with some studies showing positive effects on safety performance (Lo et al., 2014), while other studies show that certification have little or no effect on safety performance (Heras-Saizarbitoria, 2018).

Correspondingly, the role of the safety representatives also changed from securing the interest of the employees to also participate in the implementation of the more reflexive legislation. In conjunction with the development of the regulation of safety representatives, the employer understanding of, and priority given to safety and health issues has also developed to focus much more on safety management (Frick, Jensen, Quinlan, & Wilthagen, 2000; Hasle & Zwetsloot, 2011). Safety is more generally considered an issue, which should be managed in the same way as other manageable issues in the enterprises (Dyreborg, 2011; Frick, 2011). Thus, safety is usually not an area of conflict; however, the integration of safety into organizational operations does not per se imply safety and health is given priority or is secured in practice (Hasle et al., 2019).

Safety management and organizational practices in construction project organizations

In this section, I briefly present the Danish construction industry and the work organization of construction projects, making a link between the aforementioned societal developments, safety management and organizational practice.

The construction industry is characterized by its 'project-based nature, transient workforce, widespread outsourcing of labor and financial pressure' (Harvey, Waterson, & Dainty, 2019, p. 523). Typically, temporary organizations form for each construction project from a combination of client/owner/funder, principal contractor, subcontractors, suppliers, and designers (several independent firms) along with multiple other specialists and advisors. Temporary organizations are formed for accomplishing an ex-ante-determined task with a predetermined termination point (Bakker, DeFillippi, Schwab, & Sydow, 2016). As such, the overall project organization will only usually last a few years as long as the project is being designed and built. In the study reported on in this dissertation, the three case construction projects existed approximately between 1 year and 3 years. During that short time period, numerous and varying individuals and organizational actors were

involved in complex interactions to finish the construction. Many of the individual companies only have an active role for a few weeks or months. Thus, the construction process was split up among various actors who, for the most part, participated only for short periods.

Most of the project participants were hired on a contractual basis to carry out a certain task. Workers are often remunerated by a piecework system and tend to have employment linked to projects on a temporary basis (Spangenberg et al., 2003). The three case construction projects were completed on a turnkey basis, where a turnkey contractor was responsible for the entire building process based on a contract with the client. The turnkey contractor followed the project from project planning, construction and delivery to handing over the 'keys' to the client. The organizational structures follow often a linear arrangement for the supply chain with the client situated at the top. The work processes were dynamic, characterized by a constant flux of personnel and materials, resulting in limited opportunities for investment in employees and learning from experience. This dynamic and complex work setting presents a challenge to the management of such projects, including ensuring safety at the construction site, precisely because safety management happens in such short time frames, which makes the implementation of safety-promoting initiatives challenging (Lehtola et al., 2008).

The many varying project participants and changing work settings cause challenges for both the operatives, carrying out the work and the authorities, controlling and supervising organizations safety and health. In the literature, construction work and safety management within the industry is characterized by its decentralized and ad-hoc oriented approach (Dyreborg, 2006; Ringen, Seegal, & Englund, 1995a). For instance, project management only acts if accidents occur, or the labor inspectorate shows up (Hasle et al., 2019). Studies on safety culture within construction also highlight that the industry is characterized by risk taking, and a habitualization of pain, which means that accidents and minor injuries are seen as a natural part of the job at construction sites (Ajslev et al., 2013; Dedobbeleer & German, 1987; Gherardi, Nicolini, & Odella, 1998). Although, line management is in place at a construction site, the individual work groups (both from the principal contractor and respective subcontractors) work independently with relative high autonomy. During my fieldwork within the industry, the saying '*frihed under ansvar*', which can be understood as having freedom or autonomy within one's liabilities was often used to characterize construction work and its organization. Hence, construction professionals value autonomy, personal experience, know-how and the capability to solve problems (Löwstedt & Räisänen, 2014; Löwstedt & Sandberg, 2020; Styhre, 2011; Styhre & Josephson, 2006). Thus, this relatively open organization structure with

flexible adaptation in work processes may have advantages when it comes to the dynamic and ever-changing environment surrounding a construction project (Dyreborg, 2006).

However, such a flexible form of organization is also highlighted as negative for safety (Dyreborg, 2006; Ringen, Englund, Welch, Weeks, & Seegal, 1995b). Thus, the Danish construction industry is characterized by the occurrence of accidents at work, physical attrition of workers' health and early retirement, which are persistent problems (Arbejdstilsynet, 2015). Construction workers, in particular, are an exposed group, with their risk for work-related accidents more than twice as high as the average rate for all Danish industries (Arbejdstilsynet, 2015). Contractors and subcontractors often tender competitively for work, and clients often reward the companies that offer the lowest price (Harvey, Waterson, & Dainty, 2018; Jia et al., 2019) and that do not overrun the agreed-upon contract duration (Sherratt, 2016). Sherratt (2016) points out that 'the two driving forces of time and money filter down from clients, through the project and site management teams, to the operatives carrying out work on site' (p. 18). As a result, a construction project is 'a field of multiple organizations, which are engaged in competition and collaboration with each other for varied periods of time' (Jia et al., 2019, p. 389).

Compared to the rest of the world, the construction industries in the Scandinavian countries, and here particularly in Denmark, are organized through formal structures supporting safety-related collaboration, such as the aforementioned internal safety organization (i.e., the joint safety committee, a committee where managers and workers are represented). Thus, even though Danish organizations pursue efficiency in their operational processes (e.g., through key performance indicators, value stream mapping or the 5S layout tool), simultaneously they are legally obliged to ensure safety and health efforts, for instance via the formal collaborative safety organization. The establishment of such a safety organization within all companies with more than nine employees is therefore a legal requirement (Dyreborg, 2011), and every construction company and its construction sites have them in place. In recent years, partnering and Lean Construction have been introduced as new forms of cooperation between the actors in construction in Denmark that both create potential synergies with construction safety management (Forman, Laustsen, & Gottlieb, 2011).

However, British scholars pinpoint that even when construction projects are delivered using a form of partnering or alliancing, the partnerships developed still only have a limited life (Gibb et al., 2016). Furthermore, even when one organization is dominant, for instance in the case of a large principal contractor, the 'tendency is still to operate in discrete departments, almost mimicking the subcontract

mentality endemic in construction' (2016, p. 14). For instance, two out of my three empirical cases were large contractors with headquarters in Sweden and Austria, and subcontractors from across Europe. Thus, the employees who worked on the case sites in Denmark were a mixture of Danish and international construction professionals. Therefore, large construction project organizations work increasingly internationally and cooperate with international stakeholders that may not value local cooperation between employers and workers and a trust-based approach towards safety in the same way. Here, contractors and subcontractors tender competitively for work, and clients often reward the companies that offer the lowest price as found in other national settings (Harvey et al., 2018; Jia et al., 2019).

During the last decade, construction companies had not only to respond to increased regulatory demands, but also increasingly to social, environmental, and ethical demands from society (Dyreborg, 2006; 2011). Thus, companies' corporate social responsibility is now placed more central in the companies' safety management, and thus, makes safety an important strategic and commercial element for organizations. For instance, construction companies increasing interest in safety management certificates (e.g., ISO 45.001 certificate) is an indicator for companies' interest in meeting such institutional demands, at least in the bigger companies. Companies that are certificated send a signal to their environment, that they value safety and have formal structures in place to carry out their safety and health efforts, which thus can legitimize the company's safety consciousness and in return may attract new clients. Dyreborg (2006) pinpoints that this development resulted in a change of focus from safety being an issue between management and employees to being an issue between management and the organizations environment, for instance external stakeholders such as clients or customers. This tendency may be problematic, if companies' corporate social responsibility is based on, for example outcomes such as the number of absence-based accidents instead of a focus on accidents severity and their prevention (Dyreborg, 2006).

The rise of safety and health coordination in Denmark and the EU has also its foundation in EU-legislation. Within construction, safety and health coordinator are appointed to coordinate safety at sites with more than one employer present (Aulin & Capone, 2010), and is responsible for ensuring that employers apply the general prevention principles and ensuring the cooperation between employers in matters of safety. Studies pinpoint to the central role of the safety coordinator and their competencies in achieving improved work on safety in the Danish construction industry (Møller, Kines, Dyreborg, Andersen, & Ajslev, 2020) although the effectiveness of safety coordinator practice has been criticized for making doubtful contribution to better safety, where researchers have instead

pointed towards legislation and inspection as effective ways of improving safety (Andersen, Malmros, Ebbehoej, Flachs, Bengtsen & Bonde, 2019).

As mentioned earlier, the increasing mainstreaming of safety into organizations' operational processes and strategies is also seen in construction (Hasle et al. 2019). This process undoubtedly creates a stronger awareness and better integration of safety considerations into companies' day-to-day operations. However, an unintended consequence of this mainstreaming can be that safety tasks will be carried out by other organizational actors than the safety coordinator, who do not necessarily share their affinity with and expertise in safety (Uhrenholdt Madsen et al., 2019). In this way, there is a risk that construction managers may carry out only the operational tasks of safety whereas systematic tasks are subsumed under the quality management departments' jurisdiction. Importantly, that means that construction managers have to meet concurrent requirements simultaneously that may create several tensions in the micro-processes of managerial safety practices.

Thus, in the next section, I briefly present the occupational group of construction managers that I have focused on in my empirical work. Thus, I link the aforementioned societal developments and organizational practices related to safety management with the underlying safety practices of individual actors within such organizations.

Construction Managers

1. Defining construction managers

As mentioned above, safety research has somewhat overlooked the role of middle managers and how they take safety into account in their daily operations (Callari et al., 2019; Rezvani & Hudson, 2016; Styhre, 2006; Styhre & Josephson, 2006), even though their actions are a valuable asset for organizations and central to pursuing key organizational outcomes (Glaser et al., 2016; Wooldridge et al., 2008). Consequently, construction managers play an important role in shaping the safety attitudes and behaviors of frontline employees (Zohar & Polachek, 2014). As such, it is important to understand how construction managers respond to safety tensions. I thus focused my research inquiry on construction managers' safety practices. For instance, previous studies on safety climate and safety leadership point out how managers' communication affects the workers' safety perception (Kines et al., 2010; Zohar, 2003; Zohar & Luria, 2003) and how safety leadership or managers' ability to gain their subordinates' trust and respect (Wu, Wang, Zou, & Fang, 2016) is associated with positive safety practices (Grill et al., 2019).

In the literature, middle managers have been conceptualized either by their operational function or by their placement in the organization's hierarchy (Van Rensburg, Davis, & Venter, 2014). Mintzberg (Mintzberg, 1983; 1980) suggests that an organization entails three levels (strategic apex, middle line and operating core), and two supporting components (techno-structure and support stuff). Thus, the middle manager forms the middle line, providing a link between the strategic apex and the operating core. The middle manager converts the plans of the strategic apex into operational plans carried out by the operating core, and thus, is placed two or three levels below the CEO, but above the staff level, supervising (supervisors and staff) and being supervised (by top managers) (e.g., Currie & Procter, 2005; Dutton & Ashford, 1993; Floyd & Wooldridge, 1997; Huy, 2001). Middle managers are individuals who serve as 'organizational linking pins' (Glaser et al., 2016, p. 1341) to proactively identify new opportunities emerging at lower levels and to overcome obstacles by mobilizing support for initiatives from top managers. They also function as negotiator or mediator between the organization's strategy and day-to-day activities (Nonaka, 1994).

In the study reported on in this dissertation, I adopt the following operational definition: 'any manager in the middle line of the construction project organization, having staff (workers, foremen and managers from subcontractors) reporting to them (but not belonging to the executive level) and also requiring reporting to managers at a more senior level (including project directors), and holding budget responsibility' (Callari et al., 2019, p. 20). This includes both site and project managers as they both are placed in the middle line of the project having the same operational functions, and both terms were used interchangeably in the three case project organizations. They were employed by the respective main contractors and had no other projects in their portfolio than the one they were working on. Here, both site and project managers were physically placed at site, most often sharing an office in the site containers. However, site and project managers differ insofar as site managers working at the bigger sites reported to their project manager. Thus, project managers working at the two big sites, were hierarchal placed above site managers, but belonged still to the middle line and not to the executive level. Additionally, they share the same educational backgrounds as they are often specialized craftsmen (e.g., carpenters, electricians) and/or engineers by training, and thus, their role is centered around being a skilled 'construction worker' and based on gendered ideas of masculinity, freedom, and independent work (Löwstedt & Räisänen, 2014; Löwstedt & Sandberg, 2020; Styhre, 2011; Styhre & Josephson, 2006). They handle mostly operational tasks related to daily production such as time planning, budgeting, solving technical issues and supervising staff. They communicate with, and coordinate work between, the client, designers and multiple subcontractors and have to

mediate these multiple stakeholders' interests. Therefore, I chose to include both site and project managers working at the three case sites and to treat them as one occupational group. In the method section, I will elaborate their overlaps and distinctions, also in regard to the foremen role.

2. Construction managers' tasks

Construction managers are positioned between managerial work tasks at the site office and more production-related work tasks on site, enabling them to directly influence their subordinates' onsite work conditions. They work at the frontline in close collaboration with their peers and with the subcontractors, foremen, workers, and safety representatives. Every day, they meet early in the morning at the shared onsite office, where they start the day by turning on their computers, checking their e-mails and planning the work for the day. Their main responsibility is to ensure the construction process's flow with all the parties cooperating, and to push the project's progress while at the same time complying with the regularity frameworks for safety and quality. In the morning, they often walk inspection rounds on site, checking on the executed work's quality and progress and meeting their own and the subcontractors' workers and foremen to coordinate activities or solve any disputes. Regularly held construction meetings and ad hoc follow-up meetings structure their days.

As mentioned above, the increased mainstreaming of safety into organizations' operational processes (Hasle et al., 2019) has led to more segmented safety management in which safety has become part of construction managers' operational tasks that they have to carry out, idealistically, in cooperation with the local safety coordinator at site. Although, this may have increased safety awareness and thus contributes to safety integration (Uhrenholdt Madsen et al., 2019), construction managers may lack the affinity, resources and knowledge to carry out such safety efforts as they are not their main concern. During my fieldwork on the three case sites, I met numerous construction managers who voiced worries and even reluctance to carry out safety tasks. Thus, their work is characterized by tensions between multiple and often competing demands. Therefore, middle managers working at construction sites are good cases for studying safety in a complex environment replete with multiple institutional demands and for analyzing how individual actors ensure the integration of safety within organizations. By focusing on construction managers, I gained a unique insight into the safety challenges that they meet within the organization by analyzing how they balance potential tensions (see papers 1), how their self-understandings relate to safety practices (paper 2), and how safety management unfolds in practice focusing on how they collaborate with other construction professionals (see paper 3).

3. Theoretical Positioning and Analytical Concepts

This section presents the theoretical framework for my study, which informed my research inquiry on managerial safety practices. The framework served as a guideline for my conceptualization and analysis of how individual actors within organizations practice safety when facing multiple and often competing demands in their everyday work, and their differential experiences towards safety tensions. I investigated the dynamics of practices and institutions within which local reality is embedded (Haedicke & Hallett, 2016; Nicolini, 2009). Hence, I foreground a collective performance of institutions through situated, emergent and generative practices and adopted a process orientation (Langley, Smallman, Tsoukas, & Van De Ven, 2013) to help understand how safety practices dynamically unfold.

As mentioned earlier, the literature on safety management in Denmark highlights 1) the mainstreaming process of safety and increasing safety integration into organizational processes that paradoxically may lead to 2) segmented safety tasks carried out by organizational actors with no affinity to safety, and 3) difficulties to establish collaborative safety practices between different occupational groups of construction professionals, despite existing formal collaborative structures that are in place. As I wanted to analyze how individual actors ensure safety in their mundane everyday tasks by 1) identifying the multiple demands they face, 2) unpacking the relations between these demands and potential barriers for practicing integration, and 3) exploring the dynamic ways in which actors respond to such complexities, I suggest leveraging theoretical approaches within organization studies and the sociology of professions. Therefore, my overall theoretical framework lies on the intersection of institutional logics and organizational hybridity (Battilana, Besharov, & Mitzinneck, 2017; Friedland & Alford, 1991; Goodrick & Reay, 2011; Smets et al., 2015; Thornton et al., 2012; Zilber, 2021) as well as research on professions and their identities (Abbott, 1988; Davies & Harré, 1990; Gieryn, 1983; Langley et al., 2019). Compared to a single discipline, an interdisciplinary approach to examine occupational safety and safety management limits shortcomings.

As mentioned earlier, there is a gap between safety legislation and knowledge and their implementation in everyday practice, which makes a focus on the practical realities of such implementation relevant. Therefore, I analyze how construction managers handle multiple demands in their mundane everyday practices (research question 1) by employing the institutional logics perspective (Friedland & Alford, 1991; Thornton et al., 2012). I zoom in on managers' micro-

practices in social interactions both in relation to managers' professional identity claims (research question 2) by employing the concept of positioning (Davies & Harré, 1990; Foucault, 1984) and in relation to safety collaboration (research question 3) by employing the theoretical concept of boundary work (Gieryn, 1983; Langley et al., 2019). Thereby, I explain the investigated empirical phenomena (see chapter 5), which in turn qualify my theoretical contribution (see chapter 6).

This section proceeds as follows. First, I explain processual constructivism and the 'practice turn' (Nicolini, 2012; Schatzki, Knorr-Cetina, & Von Savigny, 2001) as a philosophical underpinning of my framework. I present the constructivist and practice-oriented ideas and explain why I believe that a processual constructivist stance can contribute to studies of occupational safety. Secondly, I introduce the specific theoretical concepts that I used to analyze my empirical data as part of the iterative analytical approach that I used. I start by explaining the theoretical perspective of 'institutional logics' (Friedland and Alford, 1991; Thornton et al., 2012). The relationships among logics are an important analytical lens, which I explain and discuss by focusing on 'constellations of logics' (Goodrick & Reay, 2011) and the literature on 'organizational hybridity' (Battilana et al., 2017). I explain both competing and facilitative relationships among logics within organizations. Then, I present and discuss the concept of 'professional hybridity' (Noordegraaf, 2015) in relation to individual actors' identity configurations leveraging the concept of 'positioning' (Davies and Harré, 1990) and I review and discus the literature on 'boundary work' (Gieryn, 1983). Finally, I present my assembled theoretical framework conceptualizing safety and its management as dynamic process in which organizational actors enact and navigate the relationality among multiple institutional logics through mundane micro-practices of bridging and demarcating.

Processual Constructivism and Practice-Oriented Thinking

The applied theoretical concepts are grounded within a constructivist stance informed by a process philosophy (Langley, Smallman, Tsoukas, & Van De Ven, 2013; Langley & Tsoukas, 2017) and practice-oriented thinking (Schatzki, Knorr-Cetina, & Von Savigny, 2001; Nicolini, 2012). Accordingly, I understand a processual constructivist view of managerial safety practice as continually becoming (Langley & Tsoukas, 2017) and as subject to human agency to understand and analyze how safety unfolds in practice. Thus, this dissertation foregrounds practice and the human action involved in practice (Schatzki, 2001). As a result, my inquiry focused on investigating the local details and dynamics of the practices and institutions within which the local reality is embedded (Haedicke & Hallett, 2016; Nicolini, 2009). Thus, I focused on 'micro patterns of institutional

problematics' (Zilber, 2021, p. 236), such as how people cope with multiple institutional logics (Fan & Zietsma, 2017; Smets, Jarzabkowski, Burke, & Spee, 2015; Smets, Morris, & Greenwood, 2012; Zilber & Sadeh, 2019) enacted through mundane practices such as complaining (Styhre, 2010) and positioning (Davies & Harré, 1990; Foucault, 1984). The processual and practice-oriented thinking underpinning my theoretical concepts foregrounds a dynamic and situational understanding of how individuals experience and enact institutional complexity. For instance, individual actors respond to seemingly paradoxical demands by positioning themselves or others as having certain professional identities that legitimate certain safety practices in situations filled with ambiguity, and by influencing cross-occupational boundaries. Hence, actors are 'neither autonomous nor the judgmental dopes who conform to norms: [t]hey understand the world and themselves, and use know-how and motivational knowledge, according to the particular practice' (Reckwitz, 2002, p. 256). In any situation, it is the actors' 'practical understanding' (Schatzki, 2006, p. 1864), their personal tacit know-how, that allows them to select and competently perform specific actions that they consider relevant to that particular situation. This notion was important for my study as I assumed that an institutional logic or a 'general understanding' (Schatzki, 2002, p. 77) is complemented by a practical understanding that allows individuals to navigate situations in which different general understandings of safety, for example, appear.

The common threshold for my applied theoretical concepts is the desire to shed light on organizational phenomena by getting closer to the pragmatics of everyday lives. This process- and practice-oriented underpinning allowed me to analyze complex processes of ongoing safety practices by shedding light on the everyday activities carried out by construction managers within their respective organizations (Yanow, 2006). The shared objectives for my applied theoretical concepts were to obtain a better understanding of the performance of safety practice and to sort out how the complexities of such practice influence and are resolved in organizations, such as by integrating safety into other managerial work. This perspective is an appropriate lens through which one can understand the gap in safety research described above.

3.1 Institutional theory

Institutional theory concerns the institutionalization of meanings and structures in modern organizational environments, and the organizational responses to the multiple institutional pressures and complexities surrounding them. Institutions are the social and symbolic structures that provide societal actors with meaning in a given context. Thus, institutions are transmitted through regulative,

normative and cultural-cognitive elements at the same time (Scott, 2014), and they prescribe practices or activities to organizational actors and provide resources to their social interactions.

Scholars have long recognized that organizations embed multiple institutional arrangements with conflicting or contradictory prescriptions for actions. In early institutional work, academics such as (Selznick, 1949), (March & Simon, 1958), and (Meyer & Rowan, 1977) described the vast and often conflicting demands in the environment and how they manifest internally within an organization. This 'old' institutionalism (Scott, 2014) describes how individual organizations over time are infused with values and beliefs beyond those intended at the time of foundation. These scholars describe competing demands as pervasive and inherent within all organizations (Selznick, 1957). Therefore, it is mainly the 'open systems' character that distinguishes the new institutionalism from the old, and thus the analysis of the relationship between organizational actions and the institutionalized environments that is the novel insight.

Institutional theory recognizes the environments of organizations as a key variable in any understanding of organizational behavior. Thus, organizational behavior is to a large degree determined by the organizations' quest for legitimacy and environmental pressures on organizations to conform lead to isomorphism and uniformity of organizations (DiMaggio & Powell, 1983; Powell & DiMaggio, 1991). However, over the last twenty years scholarly work has tried to explain why complexity and pluralism of institutional environments emerge and why organizations respond differently to institutional pressures. Berg Johansen and Waldorff (2015) describe this as a shift from a new institutionalism to a "change and complexity institutionalism" (Berg Johansen & Waldorff, 2015, p. 5). The notion 'change and complexity institutionalism' describes how the institutional environment that organizations face is not uniform in any way but presents organizations with multiple and often contradictory institutional logics, pressures, and scripts to navigate between (Kraatz & Block, 2008). The shift from institutional uniformity to pluralism and complexity therefore means that organizations must manage these complexities with different strategies that balance demands from various social and institutional stakeholders (Greenwood et al., 2011; Kraatz & Block, 2008).

On the one hand, isomorphic institutional pressure can be found as an element of Danish safety management. Strong isomorphic pressures exist in the field (Hasle et al., 2014), for instance in the form of legislation, inspection authorities, and numerous collective bargaining agreements between the social parties that all have led to Danish organizations having standardized formal components,

such as participatory systems or mandatory workplace risk assessments. On the other hand, occupational safety and its management also highlight the need for theories that emphasize local processes, individual agency, and the co-existence of different symbolic and meaning structures in organizations simultaneously; leaving organizational actors with more space to maneuver when facing a pluralistic institutional environment (see, e.g., Besharov & Smith, 2014; Delbridge & Edwards, 2013; Kraatz & Block, 2008).

Applying these insights on the phenomenon of safety management, it appears that first, Scandinavian scholars have shown how the field of safety management is defined by differing institutional logics (Dyreborg, 2011; Limborg, 2001; Uhrenholdt Madsen, 2017). Secondly, these scholars have pointed out that while some examples show that legislation, such as the aforementioned participatory systems, has been implemented into central strategic decision-making bodies such as line management or boards, just as many examples can be found of organizations employing a 'decoupling' strategy (Boxenbaum & Jonsson, 2008; Dyreborg et al., 2022; Hasle et al., 2021), what safety scholars have dubbed 'the sidecar' position (see, e.g., Hasle et al., 2019; Hedegaard Riis & Langaa Jensen, 2002). Finally, safety management is an illuminating case of how multiple institutional prescriptions are practiced and implemented in concrete organizations, and thus, inherent and enacted in construction project organizations.

In the next section, I introduce the theoretical perspective of 'institutional logics' (Friedland & Alford, 1991; Thornton et al., 2012), their 'constellations' (Goodrick & Reay, 2011), and the literature on 'organizational hybridity' (Battilana et al., 2017). The core analytical concepts of institutional logics and organizational hybridity are relevant concepts to address this dissertation's main research question and to understand how multiple institutional rationalities co-exist and influence individual practice, and vice versa. I focus on the interplay of construction managers' work and institutional prescriptions in the professional context of construction sites. Thus, I specifically employed the theoretical lens of institutional logics to study managerial safety practices on the individual level within organizations in which hybridity occurs. The institutional logics perspective defines my theoretical understanding of hybridity and is used to characterize the context in which these individual actors operate. The research on constellations of institutional logics and that on organizational hybridity supplement each other well and both approaches harmonize with my understanding of multiple or competing demands inherent and enacted in construction project organizations.

Both research streams are grounded in the macro-level of analysis by describing societal-level influences on organizational life by outlining the 'inter-institutional system' of western societies, composed of five societal-level orders (Friedland & Alford, 1991). However, Pache and Thornton (2020) pinpoint a recent trend toward a lesser use of logics to explore the macro-level of analysis, to favor meso-level as well as, increasingly, micro-level. The institutional logics perspective can be a useful lens to analyze individual-level behavior in hybrid organizations (Almandoz, 2014; Smets et al., 2015) to broaden our understanding of those settings in which multiple, and even conflicting, prescriptions collide in everyday operations.

3.1.1 Institutional logics and their constellations

My PhD dissertation is concerned with the individual actors who work inside organizations and who enact institutional prescriptions in their concrete practices. I suggest leveraging the institutional logics perspective (Friedland & Alford, 1991; Thornton et al., 2012), which is more sensitive to how organizations are composed by multiple and often competing sets of expectations for behavior or value systems (Ocasio et al., 2017). It also adds more focus on the individual actors that are important interpreters of institutional logics into coherent organizational practice, which is relevant for analyzing how actors may balance such contradictions and handle the safety mainstreaming process. This approach also explains where facilitators and barriers for managers' practice may come from. I applied this perspective to analyze which institutional forces may shape the way construction managers ensure safety, and how these logics are enacted (paper 1). This perspective also broadens safety science's contemporary 'either-or' approaches that acknowledge a dynamic tension between production and protection (Perrow, 1984; J. Reason, 2008), but conceptualize this tension as a competitive relation (Rasmussen, 1997; Zohar, 1980, 2002) that may enforce the separation of safety and operational practice (Hu et al., 2020). It is highly relevant to include the institutional environment and its influence on organizational and individual practices in contemporary safety approaches. Thereby, safety research is both enabled to draw attention to the environment's importance for handling safety internally, such as external clients and customers, and the importance of individual agency to analyze the practical realities of implementation in organizations. Here, the institutional logics perspective contributes theoretically to contemporary safety approaches.

Friedland and Alford (1991) initially defined institutional logics as 'symbolic systems, ways of ordering reality, and thereby rendering experience of time and space meaningful' (p. 243), and Thornton and Ocasio (2008) defined them as 'the rules of the game' of any given field (p. 112). This

approach shows how society consists of different and often competing institutionalized values and beliefs which are associated with 'a set of material practices and symbolic constructions', that enable and constrain the behavioral repertoire of social actors (Friedland & Alford, 1991, p. 248). This approach views individual and organizational behavior as situated in an institutional context that both regulates behavior and provides opportunities for agency and change (Thornton et al., 2012). Thus, logics shape action because they represent sets of expectations for social relations and behavior (Goodrick & Reay, 2011).

Contradiction and competition between the above-mentioned sets of expected behavior emerged from my empirical data and the applied iterative analytical approach as I studied construction managers' mundane practices. Such everyday practices revealed underlying tensions in managers' work, affecting their priorities and motivations towards safety management, as well as their understandings of an 'ideal' construction manager's practice and their relations with other construction stakeholders, such as construction workers. As the institutional logics perspective suggests that institutional dynamics simultaneously happen at multiple levels, I chose to draw on this perspective to frame my analysis of the interplay of institutional logics and construction managers' work practice and to understand the interrelationships among individuals, organizations, and institutions in the field of safety management (Thornton et al., 2012; Uhrenholdt Madsen & Waldorff, 2019). Hence, institutional logics can be defined at various levels, such as at the levels of societies (Friedland & Alford, 1991), institutional fields (Rao, Monin, & Durand, 2003), organizations (Spicer & Sewell, 2010) and the individual, and vice versa. While the institutional logics at the societal level penetrate other levels, the institutional logics at the other levels are not only combinations or variations of the societal logics but are also shaped by the local and cultural variations and adaptations emerging from within such levels (Lounsbury, 2007; Ocasio, Loewenstein, & Nigam, 2015). Field-level logics, for example, are interpreted by organizations and individuals and are used in their concrete contexts. In this way, the perspective can explain social actions and meaning as institutional phenomena and still include agency and strategic action from the actors in the analysis.

The relationships between institutional logics are an important theoretical issue in studies that examine how action occurs that I will explain and discuss in more detail. The institutional debate on institutional complexity often attends to co-existing logics through a binary approach: they are considered either compatible or contradictory. Even though the foundational work of Friedland and Alford (1991) recognized the coexistence of multiple logics at a societal level, early studies of institutional logics emphasized a single dominant field level logic and its effects on organizations. In

the past decade there have been several scholars suggesting that multiple logics co-exist and characterize established organizational fields (e.g., Waldorff & Greenwood, 2011; Goodrick & Reay, 2011; Greenwood, Díaz, Li, & Lorente, 2010; Greenwood et al., 2011; Lounsbury, 2007; Reay & Hinings, 2009). However, institutional scholars have focused on two coexisting logics and largely emphasized conflicts between competing logics and their representatives (Greenwood et al., 2011; Pache & Santos, 2010). Competing logics can lead to several organizational problems from intra-organizational power struggles where different logics are enacted by different organizational coalitions (Pache & Santos 2010), to processes of decoupling (Misangyi, 2016), and to declining performance (Besharov & Smith, 2014).

Within construction management and safety research, the institutional logics perspective has been utilized in empirical analyses to study the fields of work environment management (Dyreborg, 2006; Dyreborg, 2011; Uhrenholdt Madsen, 2017; Uhrenholdt Madsen & Waldorff, 2019), heat stress management (Jia et al., 2019), operations management (Hasle et al., 2021), collaborative initiatives on construction projects (Gottlieb, Frederiksen, Koch, & Thuesen, 2020), as well as client and construction supervisor practices (Cornelissen et al., 2020; Lingard et al., 2019). For instance, studies within safety management have illustrated the co-existence of state and corporation logics at the societal level of analysis (Dyreborg, 2011; Uhrenholdt Madsen, 2017; Uhrenholdt Madsen & Waldorff, 2019). Uhrenholdt Madsen and Waldorff (2019) identified three field-level logics of advocacy, commitment and compliance that are the result of a shift from the societal logic of state to that of the corporation in the Danish work environment field (e.g., through shifts in governance mode and concrete regulation in Denmark). Other scholars in the field of safety research have investigated incompatibilities between risk and efficiency logics (Hasle et al., 2021), corporation, market, and profession logics (Cornelissen et al., 2020), and production and protection logics (Jia et al., 2019, 2017). For instance, clashes between competing logics have been noted when a focus on on-site production becomes a barrier to achieving safety goals (Han, Saba, Lee, Mohamed, & Peña-Mora, 2014; Mackenzie & Loosemore, 1997). Hasle et al. (2021) explained why safety management maintains its persistent marginal function, compared to operations management in contemporary organizations, as both fields are dominated by the conflicting logics of risk for safety management and efficiency for operations management. Cornelissen and colleagues (2020) identified tensions between market and profession logic as the former emphasizes individual self-interest to increase efficiency and profits whereas the latter emphasizes high-quality work and personal expertise. Additionally, they noted market-corporation incompatibilities between managers' efficiency-seeking

behaviors and their commitment to upholding the firm's position in the market. For example, the firm's goal of complying with external safety demands to maintain legitimacy and legality collides with competitive bidding practices or self-interested clients (Cornelissen et al., 2020). Thus, we know how logics are differentiated and that competing logics impose barriers for integrating safety into daily operations (Hasle et al. 2021). This means that even though multiple logics are recognized as coexisting in a more permanent relationship, the consequence of their competitiveness is that practices are aligned with one, but not both relevant logics (Waldorff, Reay, & Goodrick, 2013).

To expand the understanding of how individual actors respond to and resolve co-existing multiple institutional logics at work, I decided to employ analytical concepts that unpack the relationships among logics cradling 'both-and solutions' (Gümüsay, Smets, & Morris, 2020; Hu et al., 2020). In this line of thinking, much research has highlighted that organizations can manage competing logics (Battilana & Dorado, 2010; Raynard, 2016; Reay & Hinings, 2009). Goodrick and Reay (2011) argued that competitive logics were reflected in work practices because of segmenting, which means that different practices were guided by different logics. Thus, their study explained how the work of a single actor could both be guided by two logics. They gave attention to the 'constellations of logics' (2011) arguing that relations among logics could be competitive as well as cooperative. They showed two different ways logics could be cooperative: relationships among logics could be facilitative (e.g., Greenwood et al. 2011) and additive. Thus, while the above-mentioned competitive relations among logics mean that practices will reflect one logic instead of another, cooperative relations suggest that practices may reflect the joint influence of multiple logics, because they can coexist and jointly influence practice. 'Constellation of logics' scholars (Goodrick & Reay, 2011; Reay & Jones, 2016; Waldorff et al., 2013) offer a toolkit to understand the relations between multiple (more than two) institutional logics in fields that can both co-exist in cooperative constellations, or in competitive constellations depending on field and organizational contingencies (Goodrick & Reay, 2011; Reay & Jones, 2016; Waldorff et al., 2013).

Within research on the field of work environment management in Denmark, Uhrenholdt Madsen and Waldorff (2019), showed how work environment professionals enact the three logics of advocacy, compliance and commitment simultaneously inside organizations that offer competitive prescriptions of practice to these actors. Previous studies on multiple logics 'provide a new way of understanding how agency may be both constrained and facilitated at the same time. Rather than practices being the instantiation of institutional logics, they may instead reflect how actors make sense of and enact institutional prescriptions' (Binder, 2007; Greenwood et al., 2011; Waldorff et al., 2013, p. 104;

Zilber, 2016). Thus, individual actors are capable and purposive to make reflexive choices of action, and thereby they shape institutions and are shaped by them. What does that mean for construction managers at the micro-level?

Multiple studies provide empirical evidence for how multiple co-existing logics can both constrain and facilitate action by focusing on the field or organizational level of analysis. In the past decade, however, more studies on the micro-foundations of institutional logics have shown beneficial relationships among multiple logics at the micro-level. Waldorff et al. (2013) viewed how logics have both competitive and cooperative relationships, which enable action in healthcare. Similarly, Smets et al. (2012) developed a model of how improvisations of work practices in response to complexity can facilitate change, resulting in a new field level logic. Smets et al (2015) also illuminated how individual actors in the insurance sector fruitfully combined seemingly incompatible logics in everyday work. Within safety management, Hasle et al. (2021) identified potentials for additive constellations between risk and efficiency logics. My study draws upon their work as I focus on the individual actors in three construction project organizations and examine how they potentially combine co-existing and seemingly incompatible logics in their mundane work practices to facilitate integrative safety management. Here, it is important to study how multiple institutional logics co-exist inside these organizations, and how construction managers use the 'space' (Waldorff et al. 2013:104) that opens to decide what should be done in a particular situation.

Besides the research literature on constellations of logics (Goodrick & Reay, 2011; Reay & Jones, 2016; Waldorff et al., 2013) a substantial part of the literature on institutional complexity has shown that complexity can have beneficial effects as so-called 'hybrid' organizations (i.e., organizations that incorporate competing logics) may balance competing demands (Pache & Santos, 2013). Thus, hybrid organizations embrace diverse institutional logics and confront institutional pluralism (Kraatz & Block, 2008) by developing practices that engage with the competing institutional logics, and sustain a hybrid form (Battilana & Lee, 2014; Gümüsay et al., 2020; Kraatz & Block, 2008; J. Mair, Mayer, & Lutz, 2015; Smets et al., 2015; W. K. Smith & Besharov, 2019). Thus, in the next sub-section, I explain and discuss the prevalence of hybridity in organizations (Besharov & Smith, 2014; Kraatz & Block, 2008).

3.1.2 Institutional logics and organizational hybridity

Hybrid organizations present a puzzle for institutional theory because they seek to combine distinct institutional logics (Battilana & Dorado, 2010; Pache & Santos, 2013), identities (Albert & Whetten,

1985; Glynn, 2000) and organizational forms (Ruef & Patterson, 2009; Tracey, Phillips, & Jarvis, 2011). Thus, they seem to run counter to the core proposition of neo-institutionalism that organizations must conform to institutionalized templates to be regarded as legitimate (DiMaggio & Powell, 1983; Haveman & Rao, 2006). However, institutional scholars have recognized that organizations frequently combine seemingly incompatible elements (Albert & Whetten, 1985; Friedland & Alford, 1991; Meyer & Rowan, 1977). Examples of such hybrids include community banks, social enterprises, public-private and strategic partnerships as well as healthcare organizations (Almandoz, 2012; Battilana & Lee, 2014; Gottlieb et al., 2020; Jay, 2013; Reay & Hinings, 2009). A large part of research on organizational hybridity draws on the institutional logics perspective (Thornton et al., 2012) to study its determinants (Pache & Thornton, 2020), its antecedents (Almandoz, 2012, 2014), how it is managed (Ramus, Vaccaro, & Brusoni, 2017) and the consequences of hybridity in organizations (Dalpiaz, Rindova, & Ravasi, 2017; McPherson & Sauder, 2013; Pache, Battilana, & Spencer, 2020). Previous studies have shown how hybridity can be driven by the combination of different institutional logics at the individual (Mcgivern et al., 2015; Smith, Gillespie, Callan, Fitzsimmons, & Paulsen, 2017), organizational (Jay, 2013; Smith & Besharov, 2019), and field (Ansari, Wijen, & Gray, 2013) levels of analysis.

In their review article, Battilana et al. (2017) note the increased environmental pressures that drive the need for organizations to span legal structures and forms and suggest that this pressure will only increase over time. Thus, hybrid organizations can be seen as a response to the plurality of institutional influences that today's organizations face (Kraatz & Block, 2008; Thornton et al. 2012). As a result, they ask whether hybridity is a distinct organizational form or rather a matter of degree within organizations, thereby recognizing that all organizations entail hybridity to some extent. Conceptualizing hybridity as a matter of degree may better reflect the empirical reality of many organizations, including construction project organizations with inherent multiple institutional prescriptions. For instance, Besharov and Smith (2014) examined how organizations vary in the extent to which they are confronted with multiple institutional logics, applying *centrality* (i.e., degree to which logics are each treated as equally valid and relevant to organizational functioning) and *compability* (i.e., degree to which logics are similar to align around shared goals, rules or practices) as analysis categories.

As scholars expanded the purview of hybridity, they turned to paradox theory to help illuminate the nature of competing demands (e.g., Ashforth & Reingen, 2014; Gümüsay et al., 2020; Jay, 2013; Smets et al., 2015; Smith & Besharov, 2019). The literature on organizational hybridity (Battilana et

al., 2017; Battilana & Lee, 2014) as well as theorizing from paradox theory (Schad, Lewis, Raisch, & Smith, 2016; Smith & Lewis, 2011) may be fruitfully used to explore the facilitative relations between multiple demands, and to uncover how people may develop 'both-and management strategies' (Hu et al., 2020, p. 2; Lüscher & Lewis, 2008; Miron-Spektor et al., 2018). In this study, however, I only drew on the notion of paradox to conceptualize the potential nature of occupational safety and safety management, which I will elaborate on in the coming section (3.2.3.).

Previous literature on hybrids has shown that hybrids either seek the permanent separation of competing logics or their integration in blended hybrids. On the one hand, hybrids decrease centrality of competing logics by structurally separating their enactments in specific compartments (Jarzabkowski, Matthiesen, & Van De Ven, 2009; Kraatz & Block, 2008; Reay & Hinings, 2009). Such structural hybridity is the separation of competing or incompatible logics in permanent organizational units, which follow a different logic and engage different audiences, thereby reducing conflict (Kraatz & Block, 2008). The downside of separation, however, is the risk that compartments become 'cellular, self-sealing, and institutionalized' (Ferlie, Fitzgerald, Wood, & Hawkins, 2005, p. 129) or estranged (Besharov & Smith, 2014).

Within research on occupational safety and safety management scholars likewise pinpoint how safety management often is part of the Human Recourse department and thus, segregated from the organizations core task, such as production or service. Here, structural hybridization corresponds with the before mentioned 'sidecare' position (e.g., Hasle et al., 2019; Hedegaard Riis & Langaa Jensen, 2002), in which organizations employ a 'decoupling' strategy (Boxenbaum & Jonsson, 2008) of having the formal safety and health status required but without any efficient integration into the daily operations of the firms. In Denmark the earlier mentioned process of safety mainstreaming has led to an increased integration of safety into other operational activities in some organizations (Hasle et al., 2019). However, mainstreaming does not per se secure a high level of safety and health when it is mainly used to show the organizations attractiveness or ethical integrity to protect itself against poor publicity or criticism from the authorities.

On the other hand, hybrids decrease their incompatibility by blending logics in new practices or arrangements so that they align around shared rules, values, or practices (Battilana & Dorado, 2010; Dalpiaz et al., 2017; Tracey et al., 2011). Blending assumes that coexisting logics are sufficiently compatible to align a hybrid around shared goals (Townley, 2002). For instance, incompatibilities can be aligned by hiring staff with no prior commitment to either logic (Battilana & Dorado, 2010),

or sufficient 'situated improvising' to develop new practices (Smets et al., 2012, p. 893). Within construction management, Gottlieb et al. (2020) shows how 'strategic partnering' is one example of an emerging hybrid organization in the construction sector as response to institutional complexity. They employ the concept of 'trading zones' (Gottlieb et al., 2020, p. 607) to show how hybrid organizing may develop over time by moving between different states of blending and segregating.

Recently scholars advocated for more flexible, agentic, and processual approaches towards managing hybridity compared to existing approaches that focus on organizational, structural, and static solutions. For instance, Gümüsay et al. (2020) highlights the role of frontline staff to engage competing logics in a highly contested hybrid (i.e., both central and incompatible logics) of the first Islamic bank in Germany. They develop a concept of 'elastic hybrididy' (Gümüsay et al., 2020, p. 4) that complements existing understandings of hybrids as either balancing competing demands via fixed structures (Greenwood et al., 2011), or via managerially imposed 'guardrails' (Smith & Besharov, 2019, p. 8) that constrain their enactment. Within construction management, Gottlieb et al. (2020) suggest an emergent process of logic blending compared to previous studies, showing how hybrids 'entail a blending or segregation of logics over time' (Gottlieb et al., 2020, p. 618). This is also in line with the emergence of new hybrid practices that span organizational and sectoral boundaries of formal organizations (Pache and Thornton, 2020), thereby highlighting the need for new forms of collaboration or cross-sector collaborations (Ferraro & Iovanella, 2015).

I position my study of safety management in the Danish construction sector at the intersection of institutional logics and organizational hybridity to theoretically characterize the context in which safety management occurs. As described above, occupational safety management is replete with institutional complexity as previous studies have found multiple, and often competing logics at the societal and field level of analysis (see, e.g., Dyreborg, 2011; Uhrenholdt Madsen & Hasle, 2017; Uhrenholdt Madsen & Waldorff, 2019). In paper 1, I employ the institutional logics perspective to examine the logics and their relationships that are present within and across the three case organizations. Due to dynamic interactions between logics and organizational responses, it is also relevant to consider practices individual actors use to construct the 'relationality' between logics (Smets & Jarzabkowski, 2013, p. 1287). Thus, I examine individual actors' micro-practices in social interactions and thereby, how construction managers may potentially combine competing demands.

3.1.3 Institutional logics, hybridity, and paradoxes

Research on institutional complexity focuses more explicitly on the environmental conditions themselves, saying that specific field-level characteristics may shape how competing demands manifest in organizations (Pache and Santos 2010). Compared to that, paradox scholars explain that paradoxes are inherent in organizational systems and often remain latent, becoming salient particularly under environmental conditions of plurality (i.e., multiple goals/demands or diversity of views, informed by multiple stakeholders), change (i.e., in work systems and environment), and scarcity (i.e., time and resources) (Smith & Lewis, 2011). Thus, paradox scholars emphasize the interdependence of opposing elements, describing underlying logics, identities, and forms as paradoxical (Cunha, Bednarek, & Smith, 2019; Smith & Lewis, 2011), continually informing the other in a dynamic relationship (Schad et al., 2016). Recently hybridity scholars understand hybridity as more pervasive and inherent in social systems (Battilana et al., 2017), employing increasingly paradoxical approaches to explore the sources and permanence of tensions at the organizational level (Ashforth & Reingen, 2014; Jay, 2013), the individual level (Gümüsay et al., 2020; Smets et al., 2015), and the leadership level (Smith, 2014; Smith & Besharov, 2019).

In paper 1, I refer to occupational safety as paradoxical to pinpoint the multiplicity and interdependency of seemingly competing institutional prescriptions that are inherent in organizations and fill the field of occupational safety and safety management (Uhrenholdt Madsen & Waldorff 2019). For instance, safety research scholars like Hu et al. (2020) suggest that managing occupational safety is inherently paradoxical because organizations attempt to (a) attain competing organizational goals (e.g., safety versus production), (b) manage ongoing contradictory processes to meet competing safety demands (e.g., stability versus flexibility), and (c) attend to multiple safety domains (e.g., staff safety versus client safety). Additionally, the notion of paradox suggests a dynamic relationship between opposing elements as the tension between them is in a constant state of becoming (Tsoukas & Chia, 2002) and seemingly resistant to resolution. This approach may expand binary safety management approaches that tend to choose between the different alternatives to alleviate conflict and uncertainty, although the tensions will resurface (Cunha & Bednarek, 2020).

However, studies of paradox remain constrained by their focus on two elements in direct opposition to one another (Smith, Erez, Jarvenpaa, Lewis, & Tracey, 2017). Knowing from the literature on occupational safety and safety management that there potentially exist a multiplicity of institutional prescriptions in the field (Dyreborg, 2011; Hasle et al., 2021; Uhrenholdt Madsen & Waldorff, 2019)

that also emerged from my empirical data; I found it difficult to accommodate potential relationships among more than two elements or logics (Ford & Ford, 1994).

Thus, in opposition to hybridity scholars such as Jay (2013) or Gümüsay et al. (2020) who integrate the institutional logics perspective with paradox theory, I do not employ paradox theory to analyze occupational safety. Instead, I use the notion of 'the paradoxical nature of occupational safety' (paper 1) as a metaphor to highlight that, seemingly competing rationales or logics are a basic part of occupational safety. Thus, either-or approaches towards safety cannot acknowledge how logics are interrelated with each other and how they can be combined. Thus, the paradoxical nature of safety pinpoints to the need of both-and solutions that drive integrative safety management. The paradoxical nature of occupational safety accentuates my understanding of occupational safety as processual and ongoing because relationships between multiple logics may change from one particular situation to another. Therefore, it is highly relevant to discern potential facilitative relationships among multiple logics within safety management, and to broaden our understanding of how and in which situations individual actors shape such potential combinations and even synergies. Thus, I use the lens of institutional logics and its constellations to understand the role of the environment in which occupational safety management occurs and to discern the relationships among multiple logics. I do so by employing a practice-driven institutionalism to analyze individual actors' micro-practices that includes the role of individual agency and practical understandings within organizations as an alternative form of surfacing tensions.

Besides research on institutional complexity also research on professional practice suggests that understanding 'hybridity' is key to understanding how organizational actors respond to the persistent tension of whether to serve 'professional' interests by facilitating quality or 'managerial' interests by emphasizing economic benefits (Blomgren & Waks, 2015; Breit, Fossestøl, & Andreassen, 2018; Carvalho, 2014; Correia & Denis, 2016; Mcgivern et al., 2015; Noordegraaf, 2007, 2015, 2020; Olakivi & Niska, 2017). Interestingly, previous studies within institutional complexity, i.e., the above-mentioned studies on institutional logics and organizational hybridity, have shown two ways in which multiple institutional arrangements may co-exist within organizations: they co-exist either in organizational actors' practice or in organizational actors' identities. On the one hand, studies on the constellations of logics have shown examples of how actors solve tensions in practice at the micro-level (see e.g., Waldorff et al., 2013; Smets et al. 2012, 2015). Studies on hybrid organizations also pinpoint practices that engage with competing institutional logics, and sustain a hybrid form (Battilana & Lee, 2014; Gümüsay et al., 2020; Kraatz & Block, 2008; Mair, Mayer, & Lutz, 2015;

Smets et al., 2015; Smith & Besharov, 2019). On the other hand, studies on hybrid professionals suggest that actors are open to adopting managerial duties and objectives alongside their professional ones (Denis et al., 2015; Mcgivern et al., 2015; Spyridonidis et al., 2015; Teelken, 2015), and have assumed that this can happen when they undergo identity transitions to overcome conflicts associated with serving competing rationales or logics (Currie & Croft, 2015; Ibarra, 1999; Ibarra & Barbulescu, 2010; Mcgivern et al., 2015; Pratt, 2000).

Indeed, there is a substantial literature, which points at identity's importance for managerial practice and safety management in construction (Ajslev et al., 2013, 2017; Andersen et al., 2015; Andersen et al., 2018; Bévort & Suddaby, 2016; Brown & Phua, 2011; Brown, 2015; Currie & Croft, 2015; Joffe & MacKenzie-Davey, 2012; Noordegraaf, 2007; Phua & Rowlinson, 2004). Thus, in the next section, I present and discus the applied theoretical approaches used in paper 2 and paper 3, that both focus on the micro-social practices in social interactions in relation to safety management. Importantly, in paper 2, I also analyze construction managers' professional identities in relation to their safety practice to uncover both managers' practices and identities as potential responses to multiple institutional logics.

3.2 Micro social practices of safety management: positioning acts and everyday contestation

Another important theoretical issue is the split between micro-level studies focusing on how institutional logics are enacted within organizations, and more macro level studies focusing on logics historical development within fields and societies. Various studies have presented large historical analyses of the developments of logics within fields (e.g., Daudigeos, Boutinot, & Jaumier, 2013; Dunn & Jones, 2010; Greenwood & Suddaby, 2006; Lounsbury, 2007). Within occupational safety management research studies have shown a historical shift from the societal logic of state to that of the corporation (Dyreborg, 2011; Limborg, 2001) that resulted in three identified field-level logics of advocacy, commitment, and compliance in the field of safety management (Madsen and Hasle, 2017; Uhrenholdt Madsen and Waldorff, 2019). Contrasting this more structural focus on institutional logics, several studies have focused on the enactment of logics within individual organizations (Binder, 2007; Currie & Spyridonidis, 2016; Delbridge & Edwards, 2013; Pache & Santos, 2013; Reay & Jones, 2016) and shown how individuals combine seemingly incompatible logics in everyday work (Smets et al., 2015).

Within safety management research, few empirical studies have incorporated data that address logics on the micro analytical level (Cornelissen et al., 2020; Lingard et al., 2019). For instance, Uhrenholdt

Madsen (2017) utilized the notion of 'reflexivity' (2017, p. 149) to identify reflexive positions from which 'intra-organizational experts can engage with the world around them' (2017, p. 168) and showed how safety professionals have 'institutional closeness' to the institutional field of safety and health in Denmark (Uhrenholdt Madsen et al., 2019, p. 359). However, we still lack insights about how organizational actors may drive potential integrative efforts among coexisting and even competing logics within construction project organizations. What do individual actors actual do, and how do they respond to existing multiple demands? Such insights create highly relevant knowledge for safety management research to address the current implementation gap and to increase safety integration.

The institutional logics perspective and studies on organizational hybridity may fall short to analyze the interplay between individuals and the organizational structures they establish and inhabit (Pache & Thornton, 2020; Zilber, 2016, 2021). Here, more practice theoretical approaches such as a 'practice-driven institutionalism' (Smets, Aristidou, & Whittington, 2017, p. 3) offer a toolkit to expand shortcomings regarding the role of individual actors and their agency (Smets & Jarzabkowski, 2013). I chose to employ this perspective to explore the micro-level of analysis and, thereby to understand those settings in which conflicting prescriptions collide in everyday operations and in which institutional complexity must be managed continually. Smets and Jarzabkowski (2013) and Smets et al. (2015) showed in their studies that institutional complexity is not encountered but constructed. In practice-driven institutionalism, the everyday work of the practitioners in the frontline is the 'engine room of social order and the practices by which jobs get done its driving force' (Smets et al., 2017, p. 3). This approach foregrounds the collective performance of institutions through 'situated, emergent and generative practices' and draws attention to the 'role of practitioners doing ordinary work when constituting institutional orders' (Smets et al., 2017, p. 3).

Practice-driven institutionalism avoids the separation of 'macro' and 'micro' and takes 'work' literally to explore the recursive influence through which institutional dynamics are constituted in the everyday work of the practitioners and vice versa. Smets and Jarzabkowski (2013) and Smets et al. (2015) have moved from the original institutionalist scope of the interface between the environment and the organization into the organization itself. Their research has given sound examples of how specific logics are actualized and mobilized and how they are related to organizational praxis (Smets & Jarzabkowski, 2013). My PhD dissertation is positioned in this stream of literature as my study was concerned with individual actors' mundane everyday practices working inside organizations, and how they potentially respond to multiple demands in their work.

In paper 2, I suggest leveraging the concept of 'positioning' to analyze actors' identity claims and related safety practices as potential answers to multiple demands and contrast the findings against a background of 'professional hybridity' (Noordegraaf, 2015). Thereby, I address the risk of atomatization identified in the safety research literature and generate valuable insights into how actors distant to the safety management field understand their work tasks and the extent to which safety management plays a part in their work. In paper 3, I analyzed individual actors' micro-social practices in social interactions in relation to safety management. Here I utilized the concept of 'boundary work' (Gieryn, 1983) to address the identified issue of fragmented safety collaboration within the Danish construction industry, and likewise to analyze how complaining as demarcation can be used to improve and constrain safety collaboration at site. Thus, the next two sub-sections present the theoretical concepts applied in paper 2 and paper 3 that together with paper 1 zoom in on how individual actors combine multiple rationales or logics (paper 1) by applying the notion of identity (paper 2) and boundary work (paper 3).

3.2.1 Positioning and professional hybridity

A sense of opposition and competition between the construction managers' safety rationales emerging from my empirical data seemed to permeate the managers' understanding of their professional selves. To understand how construction 'professionals with administrative assignments' (Olakivi & Niska, 2017, p. 20) respond to ongoing internal tensions, past research on professionalism and professional practice has suggested that understanding 'hybridity' is key (Blomgren & Waks, 2015; Breit, Fossestøl, & Andreassen, 2018; Carvalho, 2014; Correia & Denis, 2016; Mcgivern et al., 2015; Noordegraaf, 2007, 2015, 2020; Olakivi & Niska, 2017). Engineers and construction workers employed as construction managers can be described as hybrid professionals because they balance professional and managerial values and practices (Adams, 2020). I chose to take 'professional hybridity' as point of departure for paper 2, because the understanding of construction managers handling different practices and values is a fruitful lens to address the potential risk of atomization of safety tasks found in the literature on occupational safety management as construction managers are increasingly demanded to integrate safety into their work but may not be concerned about safety. Hence, construction managers may juggle operational and managerial tasks, only carrying out some parts of safety management that they find appropriate or that may fit into their practical reality.

Thus, I drew on the theoretical concept of hybrid professionalism (Noordegraaf, 2015) to explore whether construction managers may be open to adopting some managerial duties and objectives

alongside their professional ones (Denis et al., 2015; Mcgivern et al., 2015; Spyridonidis et al., 2015; Teelken, 2015). Earlier studies have assumed that this can happen when hybrid professionals undergo identity transitions to overcome conflicts associated with serving competing rationales (Currie & Croft, 2015; Ibarra, 1999; Ibarra & Barbulescu, 2010; Pratt, 2000). Here, I argue that analyzing construction managers' professional identities (Davies & Harré, 1990; Foucault, 1984) may be a particularly fruitful way of discerning such managers' general understanding (Schatzki, 2002) or 'professional logic' of what successful construction managers do to capture their embedded motivations towards safety management and their potential resistance to integrating safety into their daily operational work activities.

In line with my processual and practice-oriented underpinning, I applied a situated and dynamic understanding of professional identity and its importance in developing safety practices. Given the constructivist nature of the development and interpretation of professional identity, I leveraged Foucauldian notions of the self and drew on the positioning theory to depict how construction managers reproduce their subjectivities through speech acts in which they position themselves or others as having certain characteristics or as belonging to certain categories or identities (Davies & Harré, 1990, Foucault, 1984). Positioning can be typified when it is associated with well-established clusters of attributes, such as manager–worker. However, positioning is not always necessarily intentional (Davies & Harré, 1990). We all participate in and are subject to our own and others' expectations that we produce a coherent, consistent identity; that is, we are all subjected to social norms to some degree.

The above-mentioned speech acts in which construction managers' position themselves or others as having certain characteristics and thereby constructing identities, fits well into the practice perspective that underlies my PhD dissertation. Previous studies have combined both positioning and practice-oriented approaches, for instance to study the role of safety and health coordinators to implement safety and health measures in the Danish construction industry (Ajslev & Møller, n.d.) and the use of telemedicine in Italy (Nicolini, 2013). The applied practice perspective summarizes a 'coming together of several distinct scholarly traditions' (Nicolini, 2013, p. 9) that comprise different approaches, lines of inquiries and analytical tools, such as conversation analysis (Sacks, Schegloff, & Jefferson, 1974) or a focus on habitus and the body (Bourdieu, 1996). Hence, all practice theories belong to the same family, but 'there is no unified practice approach (Schatzki, 2001, p. 2).

Importantly, the practice perspective sheds light on micro-social practices going on in particular situations, and as the aim of paper 2 was to investigate how construction managers reproduce their professional selves in social interactions through micro-social practices, a positioning theory approach (Davies & Harré, 1990) was applied to analyze practices occurring on the micro-level of social interaction, for instance in conversation or gestures. This approach follows the suggestion from Nicolini: '*it follows that many of the theoretical and methodological insights from research programmes such as […] interactional linguistics (Davies & Harré, 1990) […] are directly applicable or at least highly relevant, to the understanding of social practice*' (Nicolini, 2013, p. 189). Positioning enabled me to illuminate how construction managers describe themselves and thereby describe the characteristics by which they measure themselves and others (Berman, 1999; Davies & Harré, 1999). These characteristics define the professional norms that construction managers must abide by if they want to be successful. Exploring managers' positioning enabled me to foster a detailed and dynamic understanding of their professional selves, and thus, create insights in how their professional logic (Friedland & Alford, 1991) is enacted in micro-social practices at site.

3.2.2 Everyday contestation and boundary work

Opposition and contestation among various parties at my three construction sites emerged also from my empirical data in form of mundane verbal comments that seemed to be ordinary practice at these sites. In paper 3, I analyzed construction managers' and workers' complaining practices to examine how professionals handle multiple demands and associated conflicts through complaining. This resonates with the identified fragmented safety collaboration within the Danish construction industry that makes complaining between different construction professionals a highly relevant case to study the enablers and barriers for such safety collaboration.

To capture construction managers' intrinsic logics of professional work in detail, it is useful to explore their safety practice when it is subjected to boundary interactions. A detailed 'template' (Friedland & Alford, 1991) of a professional logic may be hard to discern in the 'business-as-usual' mode but may be accentuated when under threat or negotiation, such as in complaining episodes between construction managers and workers. Exploring managerial safety practice under negotiation may thus be a rewarding way to generate new insights. Furthermore, the sense of opposition between construction managers and workers makes observations and analysis of the situated social interactions between the group of managers and workers plausible. Thus, I drew on the concept of 'boundary work' (Langley et al., 2019) to understand how managers and workers tackle their differences in

social interactions, to analyze manager–worker relations and to investigate the implications of this boundary work for safety collaboration.

In line with the 'practice turn' in organization and management theory (Schatzki, Knorr-Cetina, & Von Savigny, 2001; Nicolini, 2012) and institutional theory (Smets et al., 2017), boundary work is the 'purposeful individual and collective effort to influence the social, symbolic, material and temporal boundaries, demarcations and distinctions affecting groups, occupations and organisations' (Langley et al., 2019, pp. 4–5). The concept of boundary work helps develop a deeper understanding of how participants from different occupational groups purposefully negotiate their distinctions in relation to safety to downplay or create and maintain their differences. The concept of boundary work was relevant for my study due to its focus on the dynamics of collaboration (boundary downplaying) and demarcation (boundary making) that may influence work practices, learning and effectiveness in and around organizations (Lindberg, Walter, & Raviola, 2017; Mørk, Hoholm, Maaninen-Olsson, & Aanestad, 2012; Yagi & Kleinberg, 2011; Zietsma & Lawrence, 2010). I believe that a processual constructivist stance can strengthen the notion of boundary work and can contribute to the study of safety management as it offers a significant potential for integrating agency into such study.

3.3 The Assembled Theoretical Framework

In this PhD dissertation, I focus on the dynamic ways in which individual actors integrate safety into their everyday activities within organizations, specifically in a context replete with multiple, and often competing demands. I attain to shift attention from organizational structures to 'the people who inhabit them' (Gümüsay et al., 2020, p. 14; Smets et al., 2015) and study their differential experiences of tensions (regarding occupational safety management) and their individual approaches to institutional complexity. To understand such complexities, I investigated the dynamics of practices and institutions within which local reality is embedded (Haedicke & Hallett, 2016; Nicolini, 2009). I foreground a collective performance of institutions through situated, emergent and generative practices and adopted a process orientation (Langley et al., 2013) to help understand how safety practices dynamically unfold.

Alongside the above-mentioned three emerging trends identified in the literature on occupational safety and its management (Integration of safety into operations management, Atomization of safety tasks, and Fragmented safety collaboration within construction), safety science falls short in understanding the practical realities of implementing safety (and health) legislation and safety knowledge into organizational and individual practice. We know very little about how individual

actors within organizations (i.e., actors who have not safety as their main concern) handle these integration processes in their day-to-day work. Thus, I address the following limitations within the occupational safety management literature: the relative neglect of 1) dynamic both-and approaches to transcend binary safety management approaches in which safety competes with other organizational core tasks and 2) the role of middle managers' practical understandings for safety integration.

I leverage three theoretical approaches that appear to be beneficial to complement the above-mentioned limitations: 1) literature on the intersection of institutional logics and organizational hybridity; and literature on professional practice focusing on 2) actors' positioning; and their 3) boundary work. Firstly, I employed the institutional logics perspective (Friedland & Alford, 1991; Thornton et al., 2012) to theoretically characterize the context in which construction managers practice occupational safety and safety management. This perspective is ideal for investigating how individual actors react to institutional pressures when trying to meet multiple, and often competing demands within their own organizational contexts. In both the scholarly community of safety research and of institutional complexity, there have been calls for transcending the dichotomy of safety management and institutional logics respectively as being either compatible or conflicting, separated or integrated. Addressing these concerns, I respond by analyzing individual dynamic both-and responses that bridge competing demands.

Simultaneously, I address more dynamic and paradoxical responses to institutional complexity by conceptualizing occupational safety as processual and ongoing, because relationships between multiple logics may change from one particular situation to another. Therefore, it is highly relevant to discern potential facilitative relationships among multiple logics within safety management, and to broaden our understanding of how and in which situations individual actors shape such potential combinations and even synergies. Here, a practice-driven perspective has the capacity to provide a processual view of organizational matters and foregrounds the central role of mundane activities that fits well with my main concern of how construction managers enact safety management within organizations.

Secondly, I suggest leveraging the concept of 'positioning' (Davies & Harré, 1990) to analyze actors' identity claims and related safety practices as potential answers to multiple demands and contrast the findings against a background of 'professional hybridity' (Noordegraaf, 2015). Thereby, I address the risk of atomatization identified in the safety research literature and generate valuable insights into

how actors distant to the safety management field understand their work tasks and the extent to which safety management plays a part in their work. Positioning allows me to better discern construction managers' general understandings (Schatzki, 2002) or 'professional logic' of what successful construction managers do, and to capture their embedded motivations towards safety management and their potential resistance to integrating safety into their daily operational work activities.

Finally, I drew on the concept of boundary work (Gieryn, 1983; Langley et al., 2019) to further assess actors' intrinsic logics of their professional work surfacing within safety practices when their professional jurisdiction is subjected to boundary interactions. Thus, I leverage the concept of 'boundary work' (Gieryn, 1983) to analyze individual actors' micro-social practices in social interactions in relation to safety management. Boundary work expands our knowledge on the dynamics of collaboration and demarcation that may influence safety practices and how actors handle competing institutional demands, and likewise addresses the identified issue of fragmented safety collaboration within the Danish construction industry.

My assembled theoretical framework thus allowed me to conceptualize the day-to-day realities of construction managers' safety practices and their differential experiences towards safety tensions. I conceptualize safety and its management as dynamic process in which organizational actors enact and navigate the relationality among multiple institutional logics through mundane micro-practices of bridging and demarcating. See figure 1 for the assembled theoretical framework.

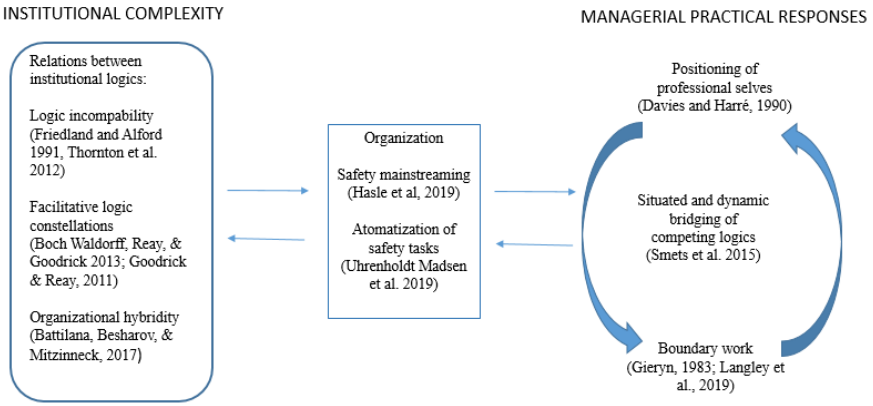


Figure 1: Theoretical framework.

4. Methodology

In this section, I firstly lay out the organizational context and nature of the PhD program in which my dissertation is embedded. I describe how I gained access to three empirical sites, and then I unfold the philosophy of science behind my inquiries. I then explain in detail how the analyses reported in this dissertation are the results of primarily inductive and iterative processes of gaining access, collecting data, coding, analyzing, theorizing, and writing the individual papers that now form the foundation of this dissertation. Then I describe my data collection drawing on ethnographically inspired fieldwork in terms of qualitative data from observations, informal and semi-structured interviews, and documentary data. Finally, I describe the analysis of the data and the coding strategy that I used.

Organizational Context and Empirical Access

The Working Environment Research Fund financed this study, which enabled collaboration among my employer, NRCWE and Copenhagen Business School. My study is part of a larger quantitative research project (TOOLBOX 2), which has been initiated as an intervention study among construction professionals to measure the effect of an integrated safety initiative to prevent occupational accidents and promote safety at Danish construction sites. As such, the project and funding are premised on the following principle: 'Work must be safe and healthy. The task of The Danish Working Environment Research Fund is to stimulate the quality and relevance of research concerning [the] working environment' (Arbejdstilsynet/Danish Working Environment Authority, 2020). Hence, the focus of my study was somewhat guided towards occupational safety, management and the construction industry. Consequently, I focused my research inquiry on construction managers' safety practices.

Despite the given direction that limited the scope of my research, my study gained tremendously from being part of a larger project as it enabled me to gain access to the empirical field and to investigate three construction project organizations, which I would not have had access to on my own. The professional relational network at NRCWE I am part of enabled me to reach out to my senior colleagues' contacts within the Danish construction industry to negotiate a collaboration and provided me with the joy of continual sparring and learning.

The aforementioned provided me with limitations and possibilities, both of which enlightened me. For instance, during my fieldwork, I experienced collaborating with three construction companies and their respective construction sites. After a few weeks of being on site, I was asked by the local safety managers to participate more actively in the project and to engage with the construction

managers and workers on site. For instance, during safety meetings, the local safety manager asked for my input concerning the planning of specific work tasks. The construction managers asked me, 'What is the result of your study?' and 'Have you written your report?' I learned that providing refined and nuanced scientific results takes a much longer time than is deemed relevant for the practitioners' interests. I also have obligations to NRCWE, and as such, I contribute to it by providing qualitative data for the larger quantitative research project. Thus, there is always something that must be exchanged for access and data, and the researcher therefore takes on a double role. In my case, I provided knowledge and input for the participating companies that asked me for relevant practice-oriented tools, and I participated in the intervention study executed by NRCWE to provide targeted qualitative data not included in this dissertation[4].

My inquiries were shaped and informed by my numerous conversations with my informants and by my own frustrations and reflections. For instance, I experienced failures as I tried to negotiate access to the internal management meetings at my first construction site. The managing project director denied my request to join and observe these meetings. In general, the construction managers were open to my presence when they were walking around on site, working at a desk in the shared office, observing the workers or interacting with the safety managers, but they were reluctant to let me observe and overhear their internal conversations. I learned to give them time, joining them for lunch and building friendly relations with them to gain their trust and acceptance. Another incident comes to mind as I was initially collecting data from two work crews on their safety practices for a certain period, applying a method used in participatory action research called snaplog[5] (Bramming, Hansen, & Olesen, 2009). Only a few workers participated actively by taking pictures of their daily work activities and challenges. Thus, I could not use this method to gather data as I became 'management's little helper'. I learned that using photos to document workers' practice is likely to be understood by workers as what Grytnes et al. (2020) describe as a 'punitive way of criticizing their work at a distance' (p. 13). Taking photos represents a management function, the 'right' way of seeing, which is an example of power being normalized through safety practice (Antonsen, 2009).

However, I also encountered numerous managers and other employees who changed my initial understanding of management and managers' formal work roles with their specific responsibilities. Management is not necessarily bound to formal roles and responsibilities, but the dividing lines of

[4] The current COVID-19 pandemic is affecting the intervention study, which was set on hold.
[5] Snaplog is a combination of the term *snapshot* and *logbook*. It is a visual method within qualitative research that makes the participants take pictures of their daily work and log their activities shown in the pictures.

activity are negotiated and changed depending on the emerging ad hoc situations and dynamic work conditions. As such, my study approached management more broadly, by focusing not on the few at the top but primarily on the many middle managers, such as the site and project managers, and their relations with peers, foremen and workers. Thus, I understand management in relation to safety as 'worked for' because the pertinent activities and responsibilities are purposefully negotiated by those with relevant skills and expertise rather than resting with an individual.

As mentioned earlier, I adopt the following operational definition of middle manager: 'any manager in the middle line of the construction project organization, having staff (workers, foremen and managers from subcontractors) reporting to them (but not belonging to the executive level) and also requiring reporting to managers at a more senior level (including project directors), and holding budget responsibility'. Both site and project managers are placed in the middle line of the project and hold similar operational and managerial functions. Both terms were also used interchangeably in the three case project organizations and, therefore, I chose to include both site and project managers and to treat them as one occupational group referring to them as construction managers.

My experiences changed my understanding of what doing research on managerial safety practice can and should mean, prompting me to be transparent about what I experienced. I now understand that qualitative inquiry requires researchers to 'focus more on the means by which organization members go about constructing and understanding their experience' (Gioia, Corley, & Hamilton, 2013, p. 2). Such a focus entails a deep, ethnographically inspired engagement in the field to be able to understand how managers appreciate their social world and how they practice safety in their everyday work activities.

Having briefly established the overall premise of the conduct of my study in collaboration with the construction industry, I now proceed to outline the ontological and epistemological assumptions that guided my empirical inquiries.

Philosophy of Science

In this section, I briefly outline the ontological and epistemological assumptions that guided my empirical inquiry. I sought to discern how construction managers enact safety practices in their everyday work activities. As such, my methodology was grounded within an interpretivist tradition and followed the assumption that meaning is tightly intertwined with context, and that 'the only way to understand a particular social or cultural phenomenon is to look at it from the inside' (Myers, 2013, p. 38).

My study took a constructivist stance towards questions of ontology and epistemology, informed by a process philosophy (Langley et al., 2013; Langley & Tsoukas, 2017) and practice-oriented thinking (Schatzki, Knorr-Cetina, & Von Savigny, 2001; Nicolini, 2012). To understand the situated dynamic nature of safety and how safety practices are constituted and enacted in everyday life, the 'practice turn' in organization and management theory (Schatzki, Knorr-Cetina, & Von Savigny, 2001; Gherardi & Nicolini, 2006) is plausible as it foregrounds practice and the human action involved therein (Schatzki, 2001). As such, my research inquiry was inspired by the fundamental idea that things (including people, ideas, institutions, power and material goods) take on meaning as they are enacted through practice, rather than having meaning as innate features of their being (Emirbayer, 1997; Østerlund & Carlile, 2005).

The 'process turn' in organization studies (Langley et al., 2013) emphasizes the understanding of organizations and organizing as processes in the making. According to Langley et al. (2013), '[p]rocess studies focus attention on how and why things emerge, develop, grow, or terminate over time' (p. 1). In this view, entities (e.g., organizations and structures) are no more than temporary instantiations of ongoing processes, which are continually in a state of becoming (Tsoukas & Chia, 2002). Such a perspective underlies, for example, what is safe or unsafe not as an objective attribute but as constituted over time through social practices. Understanding how processes themselves (e.g., safety) emerge and develop in practice makes this approach plausible. Thus, occupational safety must be understood as continually becoming and as a dynamic constituent for processes of safety-related collaboration and practices between the numerous actors at construction sites.

Accordingly, I describe a processual constructivist view of safety as continually becoming (Langley & Tsoukas, 2017) and as subject to human agency to understand and analyze how safety unfolds in practice. The emphasis that a constructivist epistemology puts on the procedural, relational and situational emergence of knowledge dovetails with how safety happens through processes of ongoing social practices.

Data Collection

My study explored construction managers' everyday mundane practices in relation to occupational safety in their organizational and institutional context. The empirical material stems from three construction project organizations in the Greater Copenhagen area in Denmark that each constitute a case and was gathered in the years 2018–2020. The three cases comprised two large construction companies and one medium-sized company representing the three construction sites.

Research design

Given the constructivist nature of safety at work, I adopted a qualitative case study design (Stake, 2005, 1995) consisting of three field studies. The aim of my study was not to conduct a comparative study of the three cases but to determine how construction managers' safety management unfolds in practice across these organizational contexts and in their institutional setting. A qualitative multi-sited case study helped me understand the contexts of construction managers and illuminate their accounts of daily tasks from multiple angles. I chose three research sites where I expected to find the phenomenon I was interested in in an intense form (Reay & Jones, 2016a) to better 'catch complexity' of safety management (Stake, 1995, p. xi). Therefore, I chose three construction project organizations that were both characterized by strong demands of productivity, quality and costs; and by unsafe and/or stressful work conditions.

I tried to balance my selection between 'variation' (Flyvbjerg, 2006; Stake, 1995) to catch the complexity of safety management, and 'comparability' to ensure that it was still possible to see commonalities and related issues across the three construction sites. To highlight aspects that are comparable I chose organizations within the same sector of construction and of a certain size in terms of capacity, manpower, and resources to ensure my case construction sites were big enough to have multiple construction managers employed. Additionally, it was important that the case construction sites had to deal with safety issues to better understand how the managers handled these issues. To ensure variation I varied my site selection in terms of construction project size (i.e., number of employees) and type (i.e., residential and industrial building), type of client, building stages and location of the companies' head office as I deemed these aspects as relevant for potential differences in safety practices (see Table 1 for an overview).

Table 1: Overview of research sites

	Construction site 1	**Construction site 2**	**Construction site 3**
Period	January–April 2018	April–June 2018	January–February 2020
Company size	Large company (250+ employees)	Medium-sized company (50-249 employees)	Large company (250+ employees)
Project type	Industrial building	Residential building	Residential building
Location of Head office	Sweden	Denmark	Austria
Construction stage	2. and 3. stage (outer and inner finishing and accommodation of the building)	2. and 3. stage (outer and inner finishing and accommodation of the building)	1. stage (concrete and earth work, sewage work and erecting the building's skeleton)

Client	End user of building (pharmaceutical company)	Public municipality	Public municipality
Number of main-contractor white collar workers (managers, designer)	40	5	20
Number of main-contractor blue collar workers on site	20	8	40
Number of sub-contractor blue collar workers on site	300	42	150

As mentioned earlier, being part of a larger research project enabled me to gain empirical access to two large and one mid-sized construction company in the Greater Copenhagen area. Thus, I was fortunate to draw on my senior researcher colleagues' contacts in the industry to establish access to the three companies' current construction projects. The respective safety managers of the companies informed me of the construction sites where the companies had experienced safety challenges. For instance, one site had experienced a high turnover rate among the workforce due to sick leave, which affected both the production and the project's formal safety organization as neither the managers nor the workers participated in the safety meetings, which in turn diminished the participants' influence on the addressing of the safety concerns. Additionally, occupational accidents occurred in all the construction sites. An example is related below.

> *Today, we had another accident at the construction site. While a worker was setting up a ventilation tube, the tube fell on his ear. The worker was immediately taken to the emergency room. I've talked to the worker, and he has been asked to stay home for a week for the ear to heal properly. The expected absence is approximately 8 days. (Company internal accident statistic, February 2018)*

As such, my three case construction sites were also selected on the basis of convenience and of their amenability to research access as I could gain access only to such sites. My cases were characterized by unsafe and/or stressful work conditions as the companies offered me access as a researcher in exchange for a free intervention oriented towards safety improvement. As such, the selection of these

sites could have been biased to some extent as one would expect unsafe and challenging work conditions from them than safe ones. Nonetheless, the two large construction companies are known for their 'frontrunner' role within the industry, and their collaboration with NRCWE could have been commercially interesting for them, as it would allow them to attract clients.

Even though my study did not aim to compare the three aforementioned cases, it strove to identify how safety unfolds in practice across organizational contexts and in their institutional setting. As such, I adopted a 'collective case study' design (Stake, 1995) for my first and second papers, in which my three cases created insights into managerial safety practice at Danish construction sites, such as what is happening at these three sites that can tell me something about Danish construction sites in general.

For my third paper, I chose a single qualitative case (construction site 2) or an 'intrinsic case study' (Stake, 1995) as I was interested in simply understanding my case at hand (e.g. what was happening at this specific site, at this time and place and under these circumstances). As complaining emerged from my empirical data and did stand out by its frequency of occurrence at this site, I chose to study this particular set of activities. As such, I cannot generalize the results I obtained from this case; I can only arrive at conclusions regarding the case.

I started gathering data on the first site. I learned to refine my interview questions and to adjust my practice of taking field notes. For instance, in the beginning of my fieldwork, I asked the construction managers how they approached safety in their work. In response, they shared with me a more positive and responsible version of themselves regarding their actions concerning safety, than would be ordinary practice, as I learned from my observations. For example, the same manager who declared the importance of safety during our interview afterwards walked on site without wearing a helmet or a safety vest. Thus, I adjusted my questions by addressing safety more indirectly, asking for instance about what they valued at work and what to them were the characteristics of a good site manager, and I asked them to describe a typical workday for them. I also quickly learned that using handwritten field notes was not feasible on site under windy and rainy weather conditions. Thus, in such situations, I made short comments to myself on my audio recorder and afterwards wrote detailed notes on my laptop in the site office.

I complemented the data I obtained from my first study with the data from a second field study on a construction site that varied from the first in size and construction type. Initially, I was interested in comparing the two cases in terms of the broader organizational and structural conditions that could

influence the existing safety practices. However, as I engaged more deeply in the field, my scope of inquiry changed; I focused on the individuals working at these sites and explored how their safety practices unfolded in such dynamic and contested settings. This change of scope was driven by my fascination with the managers' experienced and voiced tensions, which intrigued me and drove me to explore how such tensions affect their work and relations and how they cope with them. As such, I took the opportunity to investigate a third case site, as I was able to follow up on my initial hunch. Along with my scope of inquiry, I also refined my ethnographically inspired methods. For instance, in the beginning of my fieldwork I followed multiple managers for short time periods of 1–2 hours to get to know 'the office', but I later changed my approach and followed specific managers for a whole workday to be able to get a picture of a typical workday in the life of a construction site manager.

The three sites allowed me to study exactly how the theoretical concepts I applied in my study (institutional logics, hybrid professionalism, positioning and boundary work) played out in such concrete contexts of safety practice. Table 2 provides an overview of the three papers in this dissertation, including the three separate research questions and the applied methods and data sources I based my analyses on.

Table 2: Research questions representing each of the three papers and applied methods

Paper	**Research question**	**Applied methods and data sources**
1. 'Understanding how managers balance the paradoxical nature of occupational safety through a practice-driven institutional lens'	How do construction managers beneficially combine competing institutional logics?	3 field studies (comprising 3 case construction sites) 21 Interviews with construction managers Observations of meetings In-situ observations of daily work activities and situated social interactions between construction managers and their peers, foremen or workers Documents: e.g. meeting minutes, near-miss reports, e-mails, site rules and guidelines
2. 'Developing hybrid managerial practices: Managers' professional identities and their	How do construction managers' professional identities influence the organization	3 field studies (comprising 3 case construction sites) 21 Interviews with construction managers

impact on safety practices in the construction industry'	and practice of safety management?	
3. 'Complaining about occupational safety and health: A barrier for collaboration between managers and workers on construction sites'	How do construction managers and workers negotiate their professional distinctions to enhance their safety collaboration?	1 field study (case construction site 2) Observations of meetings In-situ observations of daily work activities and situated social interactions between construction managers and their peers, foremen or workers 6 Interviews with construction managers (including one foreman who was part of management) 1 Focus group interview with members of 2 work crews Documents: e.g. meeting minutes, near-miss reports, e-mails, site rules and guidelines

My three cases provided me with flexibility if one case 'disappeared' (fortunately, I finished my data collection in February 2020, a few weeks before the COVID-19 pandemic shut everything down). The breadth and depth of my empirical data combined with the iterative analytical process that I employed enabled me to uncover how safety unfolds in practice only across the three organizational settings I studied; thus, my study results lack generalizability and are closer to accuracy (Langley, 1999).

Empirical setting of construction sites

The study data were collected from three complex construction sites in the Greater Copenhagen area. As mentioned above, my three cases were comparable in regard to the industrial sector of construction, size in terms of capacity, manpower, and resources as well as existing safety and health issues. The three cases varied in terms of project size and type, type of client, building stages and location of the companies' head office. In the following, I present my cases in more detail.

Case 1. This construction project comprised a 30,000 m^2 office and research facility. The project ran from October 2016 to January 2019. When I started fieldwork at the site in January 2018, the concrete building had been built and the first production stage of the project (i.e., concrete and earth work,

sewage work and erecting the building's skeleton) had been finished. The last two production stages, however, were still ongoing (comprising all the installation work and the outer and inner finishing and accommodation of the building). In this case, the turnkey contractor was a large Danish construction company that was part of a bigger construction group with its head office in Sweden. Thus, the groups' senior management team and board of directors are located in Sweden and strategic decisions are forwarded to the local Danish business branch.

The construction project's participants were the client (pharmaceutical company), the turnkey contractor, externally hired consultants, 25 different subcontractors and their respective subcontractors. The 25 subcontractors were hired by the turnkey contractor to deliver a specific work task representing a specific trade, such as plumbing, roofing, earth and concrete work, installations, or painting. Many of these subcontractors had their own hired subcontractors, which resulted in a long chain of diverse actors on site who were linked to a common project and bound by different contracts. Every subcontractor (e.g., masonry) had one or more work crews. One work crew consisted of workers, a chosen work crew leader and a foreman, who led one or more work crews.

During my fieldwork, there were 320 workers on site and 40 managers responsible for the project's design, coordination, planning, time, and costs. The management communicated with the subcontractors and workers via several weekly meetings, such as construction, technical or lean meetings. In such meetings, the participants mainly discussed the budgets and costs, followed up on previous activities and coordinated the forthcoming work activities. Most of the construction managers were employed by the turnkey contractor and worked only on this specific project. Most of the time managers worked in front of their computers and meetings structured their days, but they also walked inspection rounds on site to follow up on workers' accomplishment of their work tasks. Managers called themselves fire extinguishers when new unforeseen issues and tasks arose.

During my fieldwork, the onsite work conditions were as follows: the construction project stretched over winter 2017–2018 and many workers were constantly exposed to the cold, rain, snow, and wind. Particularly in the beginning of the project, before the skeleton of the building was erected, the workers and foremen had no protection from the harsh weather conditions. The workers I talked with told me that they felt pressured at work due to the delays and the tight time schedule. During my fieldwork, the typical work risks and accidents on site were connected with the craning of heavy elements and loads, falls from heights (e.g., roofs, scaffolds and elevator or ventilation shafts), chemical work (e.g., epoxy floors) and movement of heavy vehicles.

Case 2. The second data collection took place at a construction site in central Zealand. This was a residential building project consisting of 44 terraced houses. The complete project ran from the beginning of December 2017 to the end of August 2018 and consisted of three construction stages. The project was 3 months delayed. During my fieldwork, the second and third production stages were carried out, involving installations, outfitting and interior fittings of the last six remaining houses. In this case, the turnkey contractor was a Danish medium-sized company.

The construction project's participants were the client (public municipality) and the turnkey contractor, who employed four site managers (all the managers were male, Danes and working for the turnkey contractor) and approximately 50 workers (all male, a combination of Danish and migrant workers) from 13 different subcontractors. The workers worked in small crews consisting of three to eight people. Both the crew foremen and the crew leaders were mainly observed to be working alongside their worker colleagues. They did not have their own office facility or computer on site. As the construction project at times demanded additional staff, the subcontractors hired temporary workers for special job tasks, many of whom were migrant workers. A high turnover rate affected the construction project's formal safety organization (i.e., a joint safety committee with manager and worker representatives). The workers chosen safety representatives very rarely participated in the regular safety meetings, which diminished their influence on the improvement of their specific work conditions.

During my fieldwork, the work conditions on site were as follows: in winter, most of the workers complained about the harsh weather conditions. The workers and the management described long workdays (10–12 hours per day, six days a week) to catch up with the time schedule, and some workers also worked seven days a week for some periods. This resulted in an average sick leave percentage of 20% for the internally employed work crew (carpenters) over various weeks. Workers and foremen attributed this to the physical and psychological work conditions on site. One of the foremen explained workers felt that they were constantly 'pressured by management'. The typical work risks on site were the craning of heavy elements, the movement of heavy vehicles close to the workstations, and falls from heights (roof) or stumbling incidents. The shortcomings in the communication process between the management and the subcontractors and among the managers were mentioned as the reason for the heavy project delays. These shortcomings resulted in misinformation, misunderstandings, and a lack of information regarding decisions.

Case 3. The third field study took place at a construction site in Copenhagen. This was a large residential building project including the construction of a 100-meter-high office tower. In this case, the turnkey contractor was a large Danish construction company that was also part of a bigger construction group with its head office in Austria. Thus, the groups' senior management team and board of directors are located in Austria and strategic decisions are forwarded to the local Danish business branch. The construction project's participants were the client (public municipality), the turnkey contractor, externally hired consultants, 50 different subcontractors and their respective subcontractors. The project ran from October 2019 to September 2022. When I began my fieldwork at this site in January 2020, the project was still in its first stage. Hence, the site was buzzing with iron workers tying steel to create the rebar framing, and workers filling the framings with concrete. During my fieldwork, there were about 60 workers on site as the project was in its first production stage and many subcontractors were yet to join the project. The site management at that time consisted of 20 managers who were responsible for the project's design, contract management and production within the given time and budget frame. Most of the construction managers were employed by the turnkey contractor and worked only on this specific project.

During my fieldwork, the work conditions on site were as follows: the construction project stretched over winter 2019–2020 and many workers were constantly exposed to the cold, rain, snow and wind. This project was technically challenging as it demanded a specific concreting technique called poured-in-place, which is undertaken in situ using a self-climbing formwork to erect the tower. The turnkey contractor had limited experience with building in height at Danish construction sites. As such, the construction managers and safety coordinators had to work closely together to find proper solutions in case of a fire or an evacuation. The typical work risks and accidents on site were in connection with the craning of heavy elements and loads, falls from heights (e.g., scaffolds and formwork) and movement of heavy vehicles.

All the three sites that I studied had similar structural conditions, as they were (semi-) temporal organizations collaborating with multiple subcontractors. The site management and workers experienced similar safety and health issues as well as dynamic and stressful work conditions. The cases varied in terms of the project type and size, including the number of subcontractors and work crews on site. The client in case 1 was represented on site (via inspection consultants) and was the actual end user of the building. The clients in cases 2 and 3 were not present on site and were to rent the residential buildings when they were done. In all the three cases, the clients and the turnkey

contractors communicated with each other in the regular client meetings while the subcontractors interacted only with the turnkey contractors.

Data sources

In this section, I present my data sources to identify and analyze construction managers' daily safety practices and situated interactions drawing on ethnographic methods (Pink, Tutt, & Dainty, 2012), which were applied differently in previous ethnographic studies within construction management and safety research (Baarts, 2009; Gherardi & Nicolini, 2002, 2006; Grytnes et al., 2020; Löwstedt, 2015; Paap, 2006; Thiel, 2012). In this dissertation, they inspired my fieldwork in the collection of observational data, interviews, and documentary data (see Table 3 for an overview of the data sources). As I sought to explore the emergent dynamic and complex processes underlying managerial safety practices at construction sites, I sought to collect in-situ and in-vivo data (Barley & Russell, 2019). Ethnographic research methods are sensitive to context and provide deeper insights into construction industry practice and offer rich depictions of practices that may challenge the taken for granted (Haedicke & Hallett, 2016; Nicolini, 2009). As a result, such ethnographic approaches 'reveal insights that provide a more comprehensive understanding of safety topics' (Oswald et al., 2019, p. 2584; Oswald, Sherratt, Smith, & Dainty, 2018).

Table 3: Overview of the data sources

	Papers 1 and 2	Papers 1, 2, and 3	Papers 1 and 2	
Case	Construction site 1	Construction site 2	Construction site 3	
Period	January–April 2018	April–June 2018	January–February 2020	Total
Recorded interviews	16	7	11	34
Focus group interviews	1	1		2
Informal interviews	4	2	2	8
Observations of meetings	10	5	8	23
Field hours	+ 90	+ 50	+ 110	+ 250
Documents	20	7	5	32

I started my data collection process by conducting four expert interviews with the two safety managers and two client representatives who worked on the first case construction site to confirm the

organizations strong demands of productivity, quality, and costs as well as existing safety and health issues. Thus, these interviews confirmed the appropriateness of my case selection. Additionally, I interviewed three foremen and one senior project manager besides having informal talks with workers who helped me mapping the organization, the who is who and they pointed me towards construction managers that I intended to interview and observe. I repeated this process on the second and third case site where I also began interviewing the respective safety managers to map the organization and to point me to potential informants. Thus, I selected informants either based on their expertise knowledge on safety and health issues, or on their operational function and their professional representation of a certain trade, such as masonry or roofing to cover different perspectives on the investigated phenomenon (Eisenhardt & Graebner, 2007; Eisenhardt, Graebner, & Sonenshein, 2016). Then, I observed both work activities involved in safety management and situated social interactions between construction managers and their peers, foremen and workers in which they negotiated how safety management should be performed. Afterwards, I interviewed both construction managers and workers to uncover the meanings of specific activities to draw out the perceptions and experiences of individuals, expressed in their own words. I used the observations to validate responses received during interviews and I could ask for explanations for prior observed behaviors to identify informants' deeper motivations for such specific activities that may mirror individual institutional convictions given actors' embeddedness within the institutional field of safety management (Greenwood et al. 2011). Interviews were further used to follow up on field note observations as I could receive immediate feedback on my observations, and thus, verify interpretations. Finally, the analysis of collected documents provided macro-level data on the institutional context of my observations.

However, the data collection process was much more dynamic than the overall chronology of my research outlines. As mentioned above, in some cases I experienced a discrepancy between what managers said during our interview and what they actually did on site under observation. Consequently, I adjusted the sequence of my data collection from initially observing managers' everyday activities before interviewing them to a more flexible approach (Fields, 2000) in which I both observed and talked to managers multiple times. That allowed me to observe them before and after an interview, and to follow-up on their interview accounts in informal talks during their workday when I observed them again. Most importantly, that allowed me to follow up on discrepancies by asking for managers' explanations, but also by asking their peers, foremen and workers to validate my interpretations. Observing former interviewed managers multiple times occurred naturally, as

they had social interactions with their peers and workers on site, and as such, I could observe them while observing the next informant. Thus, I could both adjust my questions for upcoming interviews based on managers' actual observed practices and validate my observations during the interviews.

However, I am aware that performing ethnographic studies always carry the methodological issue of affecting the subject under study. This applies to all studies of people (Foucault, 1974). Usually, people under study will be affected in the direction that they display a more coherent and positive version of themselves, than they would show outside the gaze of the observer (Foucault, 1977). In my three field studies, this may be expected to be the case as well. Hence, I can expect that my informants under observation would seek to display themselves as more responsible and reasonable in their actions concerning safety management than would be ordinary practice. Study informants may feel like they are being examined during the interview and held liable for their words (Bryman, 2004; Warren et al., 2003). Hence, informants may portray an ideal way of behaving during the interviews and not how they behave in their day-to-day life (Latvala, Vuokila-Oikkonen, & Janhonen, 2000, p. 1258). They may be less willing to open up than if they were observed in their natural setting within a group (Cacciattolo, 2015), which is why I combined observations and interviews as both methods are compatible. This compatibility results from the fact that observations directed me to significant inquiries I wanted to ask construction managers and workers, and interviewing assisted in the interpretation of the meaning of what I observed. Thus, the combination of both methods produces a variety of data to allow a comprehensive reflection of the research in question (Bryman & Bell, 2015).

Field observations. My study captured construction managers' work practices and interactions 'in the natural context of occurrence' (Adler & Adler, 1987, p. 378). In particular, Gherardi and Nicolini (2002) provided strong support for studying the daily practices and social interactions at construction sites. As such, several site visits were carried out, totaling 250 hours of observation of daily work activities, and situated social interactions between construction managers and their peers, foremen or workers. Compared to previous ethnographic studies (Baarts, 2009; Löwstedt, 2015; Paap, 2006; Thiel, 2012), my role as a researcher was that of a visitor and an observer, and only in very few instances did it involve engagement in the daily work. As such, my fieldwork involved non-participant observations; that is, I served as a peripheral member researcher, observing in the setting without participating in the setting or in the activities I was studying (Adler & Adler, 1987). My multiple site visits varied from 3 hours per day to at times two full workdays (8 hours each) in a row for 2–3 months (for each project); thus, I was able to generate extensive field notes. Typically, I

arrived at the office in the morning and sat with the construction managers in their shared offices. I often followed the managers (who had previously agreed to be followed) multiple times to follow up on their previously observed work, and I followed them for a whole workday to be able to depict a 'typical' workday for them. Besides sharing the site office with the construction managers, I was also part of the informal meetings 'at the desk', walked with the managers on site for their inspection rounds and watched their negotiations with their peers and workers. I regularly talked informally with them in the office, during walkarounds and over lunch. In quiet moments, I also asked them to reflect on their work that I had observed earlier. Additionally, I participated in the formal safety and production meetings and in the site walkarounds with the onsite safety manager, and I was able to walk around the site freely, talking informally with the managers and workers and observing what was going on among them.

As a first step, I sought to establish friendly relations with the gatekeepers and other informants on the respective projects. These relations were characterized by my desire (and need) to establish and maintain rapport with my informants to be able to gain rich data from them. Thus, in the beginning of my fieldwork, I often followed the respective onsite safety managers around and spent time with the onsite project directors to earn their trust and gain their support. Following the onsite safety managers around also eased my initial nervousness as I learned where it was safe to walk and where I should not stand (especially when heavy loads were being craned in the air). Both the safety managers and the directors directed me to the construction managers and allowed me to establish friendly relations with them, who were my informants. I adopted an open research approach, plainly clarifying that safety was the topic of my investigation. This open and honest approach reduced the risks of the construction managers' and workers' skepticism about the nature of my investigation. My being female might have also helped me establish trustful relationships with my informants. For instance, Gurney (1985) suggested that a female researcher in a male-dominated environment (e.g. construction sites) might be able to obtain easier access to such environment because women are perceived as less threatening than men. However, being female may also be problematic as women are often perceived as lacking professionalism or credibility, which can be balanced by dressing for the occasion and being prepared for any eventuality (Gurney, 1985).

During my fieldwork, I initially gained easier access to the workers than to the construction managers, who liked to talk about safety; I also got the impression that the workers perceived me as not dangerous because I was female (Gurney, 1985). In contrast, even though construction sites are male-dominated settings, there were female engineers working as construction managers in the site office.

I thus chose to 'dress up' for the occasion, such as by making sure that my safety boots were always dirty to project an image of myself as more 'on task'. Nevertheless, stretching my 'non-expert' position within construction and presenting myself as a researcher and visitor helped me establish good relationships with the construction managers. They did not question my expertise as my 'researcher role' created the social expectation that I would ask many questions.

I captured my observations and conversations in verbatim quotes, audio recording my fieldwork, including meetings, when possible. However, my observations at the shared office and informal talks over lunch or on site, including during the site walkarounds, were captured in verbatim quotes using written field notes. The setting did not allow recording in such instances due to the background noise on site and in the shared offices. It was also challenging to type notes immediately following my observations as I had no laptop computer available then and taking notes on paper would have drawn unnecessary attention to myself as an observer. Hence, I took notes by making comments to myself on my audio recorder on site, and I wrote initial notes in detail once I was back at the site office, using my laptop.

Interviews. In addition to the numerous reflective conversations, I had in the field, I conducted 21 semi-structured interviews with the construction managers, which were audio recorded and transcribed verbatim. I interviewed mostly construction managers but also six foremen, four safety managers, two client representatives and one time scheduler (see Table 4 for an overview of interviewees). I also conducted two focus group interviews with workers to obtain a broader understanding of the contextual setting and different perspectives on the invested phenomenon (K. Eisenhardt & Graebner, 2007). The interviewees explained how they perceived day-to-day work situations and the challenges they encountered in their work. I also asked them to describe a regular workday, the best and worst parts of their job and how they succeeded at work, and to give detailed examples of when and how they integrated safety into their work practices (see the interview guide in appendix 1). The interviews were also further used to follow up on my observations, receive immediate feedback on the observed actions and verify my interpretations.

My interviewees were gathered from two large construction companies and one medium-sized company. They were all male (with one exception). Of the 21 managers, 12 were site managers and nine were project managers. Three of those nine called themselves senior project managers to accentuate their seniority and, thus, extensive professional experience. Eight of the 12 site managers were 27–40 years of age, with 2–10 years' work experience. The other interviewees were in their late

40s and mid-50s, had organizational tenure and often had worked in the industry for the entire duration of their career. The professional backgrounds of the interviewees were based on their professional education and training (e.g., they were certified carpenters or electricians). Nine managers had university diplomas from construction engineering programs. All these construction managers were employed by their respective turnkey contractors and physically placed at site, most often sharing an office in the site containers.

However, site and project managers differ insofar as site managers working at the two bigger sites reported to their closest project managers and were, thus, hierarchal placed below project managers. Even so, project managers belonged still to the middle line and not to the executive level as they all share the same educational backgrounds such as being specialized craftsmen (e.g., carpenters, electricians) and/or engineers by training. They handle mostly operational tasks related to daily production such as time planning, budgeting, solving technical issues and supervising staff, but also managerial tasks relating to the systematization of work processes or documenting the quality of work. Project managers, however, report to their respective companies' top management (placed at the companies' local headquarters) and hence, attain more coordination meetings. All construction managers communicate with, and coordinate work between, the client, designers and multiple subcontractors and have to mediate these multiple stakeholders' interests.

I also interviewed foremen, safety managers, client representatives and workers to obtain a broader understanding of the contextual setting. I chose to limit the scope of my research to the occupational group of middle managers, including their relations to peers and other construction professionals such as workers. Although foremen's organizational position and, thus, closeness to the workforce is of importance, I excluded the role of foremen in safety management for the following reasons. First, as mentioned earlier, my study was part of a larger research project (Toolbox 2) that targeted the occupational group of foremen at construction sites. Therefore, I did not focus on foremen and their safety practices. Secondly, according to my operational definition of middle managers, foremen belong to the staff as they compared to construction managers were observed working mostly alongside workers and local crew leaders. They held operational responsibilities related to daily production such as time planning, solving technical issues, ordering materials and machines, and they did not report to top management. However, I interviewed multiple foremen (both on record and informally) and observed their practices when in contact with construction managers to validate managers' accounts.

Table 4. Overview of interviewees

Type of interview	Study participants	Training and educational background	Date	Construction site	Type of documentation
Manager interview	Senior Project manager 1	Carpenter	30.01.2018	1	Recorded on tape
Manager interview	Senior Project manager 2	University diploma within construction engineering	16.03.2018	1	Recorded on tape
Manager interview	Senior Project manager 3	Concrete worker & university diploma within construction engineering	16.03.2018	1	Recorded on tape
Manager interview	Project manager 1	University diploma within construction engineering	13.03.2018	1	Recorded on tape
Manager interview	Project manager 2	Blacksmith & university diploma within construction engineering	01.05.2018	2	Recorded on tape
Manager interview	Project manager 3	Electrician	11.02.2020	3	Recorded on tape
Manager interview	Project manager 4	Carpenter	20.02.2020	3	Recorded on tape
Manager interview	Project manager 5	Concrete worker	25.02.2020	3	Recorded on tape
Manager interview	Project manager 6	Blacksmith	26.02.2020	3	Recorded on tape
Manager interview	Site manager 1	Carpenter	25.05.2018	1	Recorded on tape
Manager interview	Site manager 2	University diploma within construction engineering	11.04.2018	1	Recorded on tape
Manager interview	Site manager 3	University diploma within construction engineering	26.04.2018	1	Recorded on tape
Manager Interview	Site manager 4	University diploma within construction engineering	28.02.2018	1	Recorded on tape
Manager interview	Site manager 5	Electrician	24.04.2018	2	Recorded on tape
Manager interview	Site manager 6	Carpenter	24.04.2018	2	Recorded on tape
Manager interview	Site manager 7	Joiner	24.04.2018	2	Recorded on tape
Manager interview	Site manager 8	University diploma within construction engineering	18.02.2020	3	Recorded on tape
Manager interview	Site manager 9	Electrician	18.02.2020	3	Recorded on tape
Manager interview	Site manager 10	Carpenter	21.02.2020	3	Recorded on tape
Manager interview	Site manager 11	University diploma within construction engineering	12.02.2020	3	Recorded on tape
Manager interview	Site manager 12	Carpenter	11.02.2020	3	Recorded on tape
Expert interview	Safety manager 1	Concrete worker & safety and health coordinator	21.02.2018	1	Recorded on tape
Expert interview	Safety manager 2	Carpenter & safety and health coordinator	14.02.2018	1	Recorded on tape
Expert interview	Safety manager 3	Concrete worker & safety and health coordinator	13.04.2018 13.06.2018	2	Recorded on tape & Field notes

Expert interview	Safety manager 4	Painter & safety and health coordinator	14.02.2020	3	Recorded on tape
Expert interview	Client representative 1	University diploma within construction engineering	16.02.2018	1	Recorded on tape
Expert interview	Client representative 2	University diploma within construction engineering	16.02.2018	1	Recorded on tape
Expert interview	Time scheduler 1	University diploma within construction engineering	25.02.2020	3	Recorded on tape
Work crew leader	Foreman 1	Electrician	07.02.2018	1	Recorded on tape
Work crew leader	Foreman 2	Plumber	08.02.2018	1	Recorded on tape
Work crew leader	Foreman 3	Carpenter	09.02.2018	1	Recorded on tape
Work crew leader	Foreman 4	Roofer	22.03.2018	1	Recorded on tape
Work crew leader	Foreman 5	Carpenter	26.04.2018	2	Recorded on tape
Work crew leader	Foreman 6	Joiner	20.06.2018	2	Recorded on tape
Informal interview	Worker	Painter	08.02.2018	1	Field notes
Informal interview	Foreman	Painter	12.03.2018	1	Field notes
Informal interview	Project manager	Electrician	12.03.2018	1	Field notes
Informal interview	Worker	Joiner	07.02.2018	1	Field notes
Informal interview	Worker	Plumber	13.06.2018	2	Field notes
Informal interview	Worker	Carpenter	13.06.2018	2	Field notes
Informal interview	Foreman	Concrete worker	17.01.2020	3	Field notes
Informal interview	Project director	Carpenter	13.01.2020	3	Field notes
Focus group interview	1 Work crew	Plumbers	07.05.2018	1	Recorded on tape
Focus group interview	2 Work crews	Carpenters & Joiners	14.06.2018	2	Recorded on tape

Documentary data. I collected documents from the three construction projects (e.g., reports from safety meetings, near-miss reports, safety climate surveys, e-mails and meeting minutes) and their respective companies (e.g., guidelines, standards and internal campaigns) to acquire knowledge about the cases and their contexts. Additionally, I had access to the formal safety management system in place at the sites, which contained multiple documentary data sources, such as risk assessments or site rules. All these documentary data supplemented the data I obtained from my fieldwork.

Analytical Strategies

In this section, I present an example of the iterative process through which my applied theoretical concepts emerged and are empirically grounded, and how I approached the equally iterative process of data analysis.

Empirically driven research and emergence of relevant phenomena

In this section, I describe the initial parts of the iterative process employed in this study and I lay out the analytical strategies I made use of to be transparent about what I did and how I arrived at what now appear as orderly datasets.

Especially while conducting fieldwork at the second and third construction sites, I learned to adjust my gaze while searching for theoretically relevant concepts in my empirical foundation. I relied on how my informants understood their situation, as the story below illustrates.

> Every Wednesday, at 8 a.m., the site management and all the foremen from the respective subcontractors hold a meeting to coordinate the production process, plan upcoming tasks or address unforeseen issues that had arisen. The local safety manager introduced the meeting three weeks ago due to the persistent disputes between the workers and managers, the tense atmosphere on site and the tight time schedule, which made people voice their concerns about being 'constantly behind' with their work. The senior project manager facilitates the meeting, asking every foreman: 'How far have you come?' and 'When do you expect to be done?' The foremen react reluctantly, fumbling with the current time schedule in their hands, looking through the many pages. The reason for this, they explain, is that they are behind schedule and they blame the site management for not planning their work properly. The senior project manager, in contrast, said that the meeting should not focus on discussions about the reasons for why one is delayed, but on making the subcontractors aware of their need to hire more workers. *(Field notes, June 20, 2018)*

As paper 3 explains in detail, the experience presented in the above story became central to the managers and workers on site and hence made me understand how the constant oppositional relations between the managers and workers influence the safety practices on site. During the following month, I learned more about the situation from one-on-one interviews with the managers and from focus

group interviews with the work crews. It took me some time to understand that both occupational groups were constantly complaining, and what it meant to complain about unsafe and stressful work conditions. My focus on complaining (see paper 3) was not initially part of my inquiry; its significance emerged through observations as to what was special and surprising during fieldwork. I tried to be open to unexpected empirical links that could enable me to capture surprising and interesting data that I could not have expected beforehand. Among the practices identified in interactions, complaining stood out by its frequency of occurrence, and workers addressed their complaining mostly towards the group of managers and vice versa. Therefore, I focused my attention to the discursive and subtle practices of complaining between managers and workers. This openness on my part did not follow a purely inductive approach. In line with the processual constructivist stance taken in this study, the analytical process of abductive theorizing (Haedicke & Hallett, 2016; Locke, Golden-Biddle, & Feldman, 2008) enabled me to go back and forth so I could come up with a more plausible explanation of what was going on. In this process, scholars have an initial insight originated from the empirical data, which is then coded, categorized and progressively worked to a higher level of abstraction (Gioia et al., 2013). This circular analytical movement enables a close intertwining of theory and data, making the data collection and especially the data analysis process highly iterative and reflective.

A sense of opposition between managers and workers made the observations and analysis on the group level of situated social interactions between the groups plausible. I wanted to understand how managers and workers tackle their differences and looked for evidence of boundary work (Langley et al., 2019) in social interactions. I went back and forth between the data I had obtained and the potentially relevant theory to explain the emergence of a conceptual framework. I gradually shifted from seeing conflicts between and among construction professionals to seeing oppositional relations between occupational groups and the role of complaining, and hence emphasizing boundary work (see paper 3).

To summarize, I have tried to provide an example of how the ongoing process of shifting between empirics and existing theoretical concepts in my study allowed me to finally focus on the concept of boundary work (in paper 3). That was one part of the iterative process I employed in my study; the other part focused more on the analytical strategies, on which I will now reflect.

The rigor of qualitative research and coding of qualitative data

Case study research has been criticized for lacking scientific rigor and for providing little basis for generalizability, that is producing findings that may apply to other settings (Tsang, 2014). As such, I approached my iterative process of analysis with as much transparency and clarity as possible to ensure its trustworthiness.

As my individual papers show, the process of going from data to findings varied among papers 1, 2 and 3, in which I outline the distinct analytical strategies I employed (see the separate sections on the data analysis). However, my analytical processes had the same steps to a certain extent. These steps were interlinked and unfolded as an iterative process, going back and forth between the data obtained, the field and the theoretical concepts. In the following, I explain the analytical choices I made along the way in an attempt to be transparent, and I elaborate on the separate steps of the data analyses that I conducted for my individual papers.

Initially, I transcribed all the interviews and observations, and together with my field notes and documentary materials, I systematized the empirical data by structuring, organizing, coding, and analyzing them using the NVivo 12 software. The coding process and the search for themes and interests in my data varied in my papers, but in all my analyses I started with more open-ended inductive coding, creating initial codes close to my data. This initial cycle of coding was followed by multiple cycles of coding, in which I engaged with the existing literature and drew on existing theoretical concepts related to my empirical phenomena (Haedicke & Hallett, 2016).

For my third paper (which reports the results of the first analysis I conducted), I created open codes for the managers' work objectives, daily safety-related work situations, work relations and conflicts. As a result, I got lost in the overwhelming number of In-Vivo codes that came to constitute relevant categories, including safety tensions, complaining and collaboration. It took me several rounds of coding, going back and forth between my data and the literature and taking a step back to look at my initial empirical puzzles before I discovered the practice of complaining and a connection in the structure of the open coding in terms of how complaining influences the collaborative safety practices.

For my second paper, I applied interviews only for the analysis of the construction managers' understanding of their professional selves. Thus, I started with open-ended coding but moved relatively quickly towards focused and categorical coding (Charmaz, 2014; Hesse-Biber, 2018). Because my analysis aimed at identifying positioning acts in relation to safety, I applied specific theoretical concepts to conduct the analysis within my codes.

For my first paper (which actually reports the results of the last analysis I conducted), inspired by Gioia et al. (2013), I applied the already-coded managerial practices from my initial analyses to make the data analysis more systematic across my datasets. The data analysis consisted of two main sub-analyses: one focusing on how the construction managers practiced safety in their everyday work and one focusing on identifying the local institutional logics. The first step was inductive to identify the managerial safety practices across all of my available data. The second step was deductive, based on the existing conceptualizations of institutional logics within construction management and safety research (e.g. Uhrenholdt Madsen, 2017; Cornelissen et al., 2020; Hasle et al., 2021). The codes of mundane managerial safety practices provided the basis for relating the analysis's first-order findings as examples of the construction managers' workdays to the elemental building blocks of institutional logics found in the literature on occupational safety and construction management. As my analysis aimed to identify the relationships between the existing logics and the practices enacting them, I drew on existing theoretical concepts (Smets et al., 2015) that provided second-order findings and that enabled me to identify specific situations in which the construction managers were able to combine multiple logics (see an excerpt of the results of the first- and second order findings in appendix 2).

Looking across my three individual papers, I conclude that the analysis I conducted was neither purely inductive nor purely deductive but an iterative process of abduction. Shifting between an inductive approach to the data and a deductive one can be seen as a strength in exploring the dataset and in unfolding its richness. In-depth analysis of rich empirical data, triangulation of data sources and multiple iterations of data collection, drawing on theoretical concepts and analysis were at the center of the study. According to Langley (Langley, 1999), my approach was closer to 'accuracy' than to 'generality' in the theoretical contributions made (1999, p. 694). Accuracy means that I stay very close to the original data. However, accuracy may compete with generality, which relates 'to the potential range of situations to which the theory may be applicable' (1999, p. 695) as it can be difficult to move from a specific phenomenon to a more general formal theory. In the following, I unfold the three individual papers that form the foundation of this dissertation.

5. The Three Papers of the Dissertation – Outline and Key Findings

In this section, I outline the three separate papers that form the foundation of this dissertation, each of which is a complete paper addressing its own topic and research question. However, all the three papers are interrelated as they contribute to the answer to my overall research question and as when

combined, they illuminate the construction managers' dynamic safety practices in an environment replete with multiple institutional logics.

In my study, I investigated construction managers' daily safety practices by unpacking the underlying more complex processes and mechanisms involved in the competing demands that they encounter in their everyday work. Each paper addresses the dynamic ways in which such complexities are managed, from bridging competing demands (paper 1) to positioning oneself (paper 2) and to the mundane practice of complaining (paper 3). Together, these dynamic practices explain how organizational members balance safety at the micro-level, and thus show how multiple institutional logics are enacted within construction project organizations. In the following, I present the key findings reported in my three separate papers.

My first paper, 'Understanding how managers balance the paradoxical nature of occupational safety through a practice-driven institutional lens', reports the results of my exploration of the construction managers' dynamic safety practices and how they combine seemingly competitive demands in their everyday work activities. The paper is central in my dissertation as I believe that it is foundational for the combined theoretical contribution of this dissertation. Empirically, the paper uncovers three institutional logics across the three organizational settings: a logic of professionalism, a logic of production and a logic of regulation, and discerns the mechanisms that trigger the bridging of these logics: (1) silent acknowledgment; (2) a collaborative relational network and (3) dynamic decision making. The paper has a twofold contribution. Firstly, it contributes to the theoretical discussion on safety mainstreaming by applying the theoretical concept of institutional logics from a practice-driven perspective. In so doing, the paper provides a way of understanding how construction managers enact safety dynamically through the discretionary use of institutional logics both in cooperative and competitive relations, as managers see fit to the situation at hand. As a result, the paper provides new insights on how actors on the ground transcend either-or understandings of occupational safety management, and thus, how they enact potential complementarities between logics. Secondly, the paper contributes to the discussion on the constellations of institutional logics by understanding multiple safety rationales as inherent in contemporary organizations to grow the understanding of facilitative relationships between multiple institutional logics. The paper is single authored and has been published in the *Safety Science* journal.

In my second paper, 'Developing hybrid managerial practices: Managers' professional identities and their impact on safety practices in the construction industry', my co-authors and I focus on

construction managers' professional identities and the importance of these for safety practices that encompass both safety and other operational goals. Whereas the first paper investigates how managers enact multiple institutional logics, this paper further discerns the managers' professional self-understandings of what successful managers do to capture their embedded motivations towards safety management and their potential resistance to integrating safety into their daily operational work activities. Empirically, this paper examines the implications of the managers' perceptions of their own professional identities on the organization and practice of safety. Drawing on the notion of positioning, the paper offers four typified positions associated with the characteristics of an ideal construction manager that are central to such managers' self-described professional identities: (1) the trouble-shooter; (2) the non-police officer*;* (3) the quality-seeking professional and (4) the self-sufficient craftsman. By combining these findings with the literature on hybrid professionalism, my co-authors and I were able to show that construction managers struggle to combine conflicting identity configurations and instead engage in a situated and dynamic (re)construction of their identities, which enables them to develop other forms of hybridity: hybrid safety practices that have implications on their appreciation of safety. Hybrid practices are understood as bringing together practices potentially embedded in different identity configurations. Managers appreciate independence, flexibility, and professional discretion in their work, but they are subject to centralised organisational documentation demands that most often draw on control and command approaches to safety. Hence, managers draw on control approaches even though they value flexibility, resulting in trade-offs such as avoiding safety documentation by looking the other way. Our findings show, managers mostly carry out parts of safety management that they find appropriate or that fit their professional identity configurations. Thus, our findings support the risk of atomization of safety tasks found in the literature on occupational safety management and highlight the need to develop both-and approaches towards safety management that also target managers' professional identity configurations. Here, we argue for an alignment between construction managers' professional identities and their practices to integrate safety management into their daily work activities. The paper has a twofold theoretical contribution. Firstly, its insights contribute to the theoretical debates within safety science on the changes in construction safety management by drawing attention to the role of construction managers' professional identities. Secondly, the paper contributes to the literature on hybrid professionalism in the construction industry by combining this perspective with the notion of positioning, thus allowing a more situated and dynamic understanding of professional hybrid identity in dynamic work contexts. The paper is co-authored by Associate Professor Susanne Boch Waldorff

and Professor Morten Thanning Vendelø of the Copenhagen Business School, and by Jeppe Z. N. Ajslev of the National Research Centre for the Working Environment. I will submit the paper for publication to a special issue in the *Safety Science* journal corresponding the earlier mentioned *Working on safety* conference 2022, thereby addressing the PhD assessment committees' valuable recommendations for improvement.

In my third paper, 'Complaining about occupational safety and health: A barrier for collaboration between managers and workers on construction sites', the boundary work analysis presented in this dissertation reflects how construction managers and workers negotiate safety through the mundane practice of complaining. To corroborate the construction managers' general understanding of their professional work, this study explored the construction managers' safety practices when accentuated in boundary interactions. Empirically, the paper offers a typology of four complaining mechanisms and their relational dynamics: (1) shifting the responsibility for advancing safety; (2) defending oneself against strained work conditions; (3) dealing strategically with criticism and (4) blaming other occupational groups. By combining these findings with the literature on boundary work, my co-authors and I conceptualized complaining as a tool for collaboration and/or demarcation. As a result, the paper provides new insights on how complaining as boundary work influences the quality of safety collaboration by showing how construction managers and workers purposefully influence their differences. The paper has a twofold contribution. Firstly, it contributes to the theoretical discussions within safety science on the identified issue of fragmented safety collaboration within the construction industry by drawing on the concept of boundary work. Secondly, it contributes to the boundary work literature by operationalizing complaining as boundary work to empirically examine how boundaries are constructed. The paper is co-authored by Associate Professor Susanne Boch Waldorff of the Copenhagen Business School and by Johnny Dyreborg, Pete Kines and Jeppe Z. N. Ajslev of the National Research Centre for the Working Environment. The paper has been published in the *Construction Management and Economics* journal.

In sum, across my three papers I found the three dynamic micro-level practices of bridging, positioning, and complaining that illustrate how organizational members balance safety at the micro-level within organizations. Safety management, thus, is understood as a dynamic process in which organizational actors enact multiple institutional logics both in cooperative and competitive relations, depending on how managers see safety fit the particular situation or/and identity configuration. As a result, these findings create valuable insights into how the safety mainstreaming process is realized

within construction project organizations and shows that a focus on individual actors' situational judgments, their professional identities and worker-manager relations is necessary when safety shall be a shared end for everyone.

6. Concluding Discussion and Contributions

In the previous sections of this dissertation, I highlighted both a gap between Danish safety legislation and safety research knowledge and their implementation in organizational practice, and also a gap between organizational actors' everyday tasks and safety management tasks, identified within the literature on safety science and safety management (see, e.g., Dyreborg et al., 2022; Dyreborg et al., 2020; Hasle et al., 2017, 2021; Malmros, 2018; Mischke et al., 2013; Uhrenholdt Madsen et al., 2019; Walters et al., 2011). Hence, a research focus on the practical realities of such implementation and integration is relevant.

Therefore, I investigated how individual actors within organizations, specifically in a context replete with multiple, and often competing demands, integrate safety into their mundane everyday tasks by exploring both construction managers' daily safety practices in social interactions and the negotiations they have about how safety management should be performed. Before presenting the study's contributions, I return to my main research question and show how the combined insights from the papers comprising this dissertation propose an answer to it.

> *How do construction managers integrate occupational safety into their everyday operational work when facing multiple and often competing demands, and what are the implications of this for managers' safety management?*

To answer my main research question, I attained to shift attention from organizational structures to 'the people who inhabit them' (Gümüsay et al., 2020, p. 14) by studying construction managers' differential experiences of tensions (regarding safety management) and their individual approaches towards integrating safety and other operational tasks. In this study, I considered how multiple institutional logics influence safety practices at the micro-level and how actors' micro-social practices may facilitate the relations among logics or a specific constellation of logics within the field of safety management. As described above, occupational safety management is replete with institutional complexity as previous studies have found multiple, and often competing logics at the societal and field level of analysis (Dyreborg, 2011; Hasle et al., 2021; Uhrenholdt Madsen & Hasle, 2017; Uhrenholdt Madsen & Waldorff, 2019).

In particular, it is the dynamic relation among institutional logics and the three identified micro-social practices of bridging, positioning and complaining that actors used to navigate relationally among the identified logics or rationales that helped me to understand how logics impact micro-social practice and, vice versa, how construction managers' practices impact this specific logic constellation across three Danish construction sites. Based on my data I found and theorized the underlying mechanisms that trigger these practices to both facilitate competitive and cooperative relations among logics, enabling actors to navigate their relationally in a dynamic process.

In the following, I firstly highlight the combined contributions of the papers making up this dissertation in terms of their theoretical implications. Here, I present the theoretical concept of 'dynamic safety management' to understand how individual actors enact complementarities. Then, I summarize how the identified institutional logics within my empirical context influenced managers' safety practices at the micro-level *(Constraining/Enabling safety integration)* and vice versa (*Practices influencing competitive/cooperative relations*). Secondly, I highlight the combined contributions in terms of their practical implications. Finally, I discuss how my findings can stimulate further research possibilities.

Theoretical Contributions

In an attempt to answer my main research question, I applied theoretical concepts found within organization studies that share the objective of understanding the performance of safety management in complex and dynamic work settings. I identified the multiple demands construction managers encounter in their work and potential barriers for practicing integration by unpacking the relations between these demands. Therefore, I suggested leveraging research that lies on the intersection of institutional logics and organizational hybridity (Battilana et al., 2017; Friedland & Alford, 1991; Goodrick & Reay, 2011; Smets et al., 2015; Thornton et al., 2012; Zilber, 2021) to theoretically characterize the context in which construction managers practice occupational safety and safety management (paper 1). I employed a practice-driven perspective that has the capacity to provide a processual view of organizational matters and foregrounds the central role of mundane activities that fits well with my main concern of how construction managers enact safety management within organizations.

By showing that the relationships among institutional logics influence the way safety practices are both constrained and enabled, and vice versa, how actors' practices impact the relationships among logics, I contribute to the identified theoretical discussions in the literature on safety research and

safety management in three ways: by 1) showing how organizational actors enact complementarities within organizations, 2) proposing a dynamic both-and approach towards safety management to improve the safety mainstreaming process and 3) highlighting the role of middle manager' professional identities in the changing of safety management strategies.

First, in contrast to prior studies within safety management (Cornelissen et al., 2020; Dyreborg, 2006, 2011; Hasle et al., 2021; Jia et al., 2019; Madsen, 2017; Uhrenholdt Madsen & Waldorff, 2019), I show how organizational actors enact complementarities between multiple and seemingly competitive logics at the micro-level by engaging in the practices of bridging, positioning and complaining. Construction managers draw on these practices to navigate the relationality between the identified logics, as actors were able to facilitate both competitive and cooperative relations, depending on the dynamic demands they meet. Hence, my findings suggest that consideration of the dynamic relation between separating (segmenting competitive logics) and reconnecting practices (bridging logics) may reveal new insights into how institutional logics at the micro-level have beneficial relationships. Similar to other studies on the micro-foundations of logics (e.g., Smets et al., 2015, 2012; Waldorff, Reay, & Goodrick, 2013), I show how individual actors fruitfully combine seemingly incompatible logics in everyday work. My findings, however, show that organizational actors draw on a repertoire of practices that shape the constellation of logics in particular ways and thus, I discern the mechanisms underlying the safety mainstreaming process and its barriers.

In the following, I summarize how the identified institutional logics within my empirical context influenced managers' safety practices' and vice versa. I start by suggesting the concept of 'The seesaw of dynamic safety management' to theoretically understand how actors navigate the relationality among logics, and thus how they integrate safety into everyday work. Then, I shortly present and discuss the identified interplay between three co-existing institutional logics and actors' practices.

Dynamic safety management: Balancing the seesaw

I observed that construction managers enacted three identified institutional logics both in competitive and cooperative relations, depending on the situation and/or location. Thus, managers enacted safety management in a dynamic more flexible way by separating and reconnecting practices fluidly during their workday. Managers were enabled to do so by enacting the three aforementioned micro-practices of bridging, positioning and complaining that both facilitated competitive and cooperative relations among logics. For instance, they started their workday walking rounds on-site guided by the logic of professionalism (e.g., positioning themselves as trouble-shooters), joining a coordination meeting at

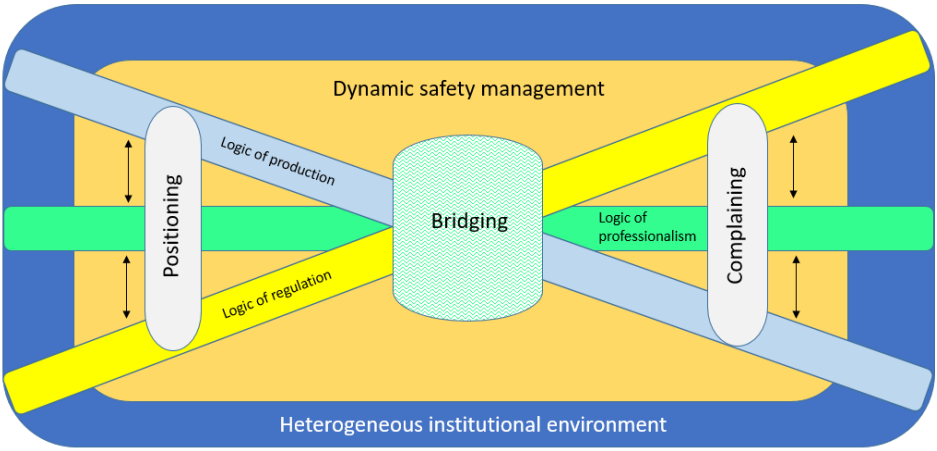
a later point of time guided by the production logic (e.g., complaining about subcontractors' delays), followed by talking to safety representatives guided by the regulation logic (e.g., planning access paths during safety meeting) to finally, contracting with safety compliant subcontractors (e.g., drawing on their relational network at the office).

Whereas bridging exemplifies how managers reconnect practices that are governed by different logics, complaining, and positioning mostly exemplify how managers demarcate themselves and thus, separate such practices. Hence, demarcating echoes Smets et al.'s (2015, p. 940) notion of 'segmenting' competitive logics through separating practices that are governed by different logics. Managers openly ascribed to all three identified logics and combined them several times during a day following their own judgment of the situation rather than a prescribed template by drawing on their nested understandings (Schatzki, 2002, 2006).

Similar to previous studies (e.g., Goodrick & Reay, 2011; Lounsbury, 2007; Purdy & Gray, 2009; Smets et al., 2015), I see that particular practices are governed by particular institutional logics, but in contrast to other scholars (e.g., Cornelissen et al., 2020; Uhrenholdt Madsen, 2017; Pache & Santos, 2013) I show that organizational actors draw intuitively and reflexively on a repertoire of practices enabling them to navigate the relationality between these logics as seems fit to their practical realities. Thus, my empirical findings support Greenwood et al.'s (2011) suggestion that actors may take advantage of available logics.

Taken together, I advocate for a more dynamic understanding of safety management, constituted through social practices that enable actors to enact multiple institutional logics dynamically and continuously in both competitive and cooperative relations. A dynamic and more flexible approach towards safety management facilitates a more fluid transition between separation and integration, as construction managers flexibly engage in competing logics. I use the metaphor of a seesaw to capture this dynamic and flexible safety management: to stay in balance actors have to constantly shift between moving up and down. Hence, managers shift dynamically between separating and reconnecting practices in order to navigate the relationality among logics and thus to balance safety management (see figure 2).

Figure 2: The seesaw of dynamic safety management



Competitive relations among institutional logics constrain safety integration

Managers' safety practices and their integration into everyday operational work was constrained through the competitive relationship among the three logics in the constellation (*logics of production, professionalism and regulation*). Hence, managers responded to this constellation of logics by *over-prioritizing one logic* or/and *segmenting competitive logics*.

Over-prioritizing one logic

The first way I observed integrative practices constrained is when managers struggle to attain competing goals simultaneously (i.e., safety versus production) and apply an either-or approach to solve underlying tensions in their work activities. Thus, they over-prioritize one logic in lieu of another. Somewhat similar to other studies pinpointing the presence of an influential logic (e.g., Reay & Hinings, 2005; Suddaby & Greenwood, 2005; Waldorff et al., 2013a) I show that construction managers hold values and beliefs associated with the logic of production. For instance, managers prioritize 'getting work done' (logic of production) in lieu for working safely (logic of regulation). The widespread adherence to the logic of production meant that practices, which did not reflect the principles of efficiency were pushed aside to reach production goals. Managers mostly lack engagement in safety-related work and thus, separate their safety management practices from other

operational tasks, which is also reflected in their identified positioning acts that are central to managers' self-described professional identities (paper 2).

For instance, across my three cases I observed the over-prioritizing of the production logic in the ways managers participated in the formal collaborative safety organizations (i.e., internal safety organization). In one of the cases, neither employees nor managers participated regularly in safety meetings. The work crews had very rarely chosen safety representatives, which thus diminished workers' influence to improve safety. In this case, safety appears to have a low status among managers, who positioned themselves against safety tasks by stressing their different practice domains, e.g., not wasting important time doing inspection rounds or attending safety meetings. In another case that represents a large construction company, an employee who had gotten the title, but who had neither a budget nor a position to influence operational processes represented management. Thus, even though the formal structures were in place, the appointed management representative showed no engagement. In these cases, the formal safety organization seems somewhat hollow and thus, they may be examples of organizations employing a 'decoupling' strategy (e.g., Boxenbaum & Jonsson, 2008; Dyreborg, Thorsen, Laursen & Villadsen, 2020; Hasle et al., 2021) what safety scholars have dubbed 'the sidecar' position (Hasle et al., 2019). Nevertheless, in one of my cases the collaborative safety organization was actively used. In this specific case, multiple managers joined the meetings and they got concrete tasks in which they had to align their work with safety requirements.

Thus, the identified process of 'mainstreaming' safety into operations of organizations (Hasle et al. 2019; Uhrenholdt Madsen, 2017), does not mean that organizational actors integrate safety into their operational tasks. In contrast, managers do not see safety as part of their identity and position themselves partly against it. These findings support the before mentioned gap between safety legislation and its practical implementation on the micro-level and the lack of practical integration. Even though, mainstreaming has increased in Danish organizations, at least for my cases within construction it is mainly used to show the organizations attractiveness to engage with new clients.

Thus, over-prioritizing one logic in favor for another influences manager' practices in terms of separating safety management and operational tasks in everyday work. These findings reflect traditional approaches to safety management that view safety as being in direct competition with other organizational goals, such as efficiency or productivity (Rasmussen, 1997; Zohar, 1980, 2002), which

may be considered problematic because such approaches may reinforce a separation between the management of safety and the management of operations (Anton Shevchenko et al., 2018).

However, even though Danish organizations pursue efficiency in their operational processes (e.g., through key performance indicators, value stream mapping or the 5S layout tool), simultaneously they are legally obliged to ensure safety and health efforts, for instance via the formal collaborative safety organization. Additionally, strategic partnering (Gottlieb et al., 2020) or Lean Construction have been introduced as new forms of cooperation between the actors in construction in Denmark that both create potential synergies with construction safety management (Forman et al., 2011). Thus, together with the formal safety organization, these voluntary forms of cooperation may facilitate cooperative relations between seemingly incompatible logics.

Segmenting competitive logics

A second way through which integrative safety practices can be constrained is segmenting logics. Segmenting is the separation of practices that are governed by different logics. Thus, it allows competitive relationships to coexist by partitioning work consistent with different logics among actors. In my cases, segmenting of logics were enacted through the micro-practices of complaining and positioning that constrain managers' ability to reconnect separated practices, thus integrating safety into operations. For instance, managers complained about the projects' efficiency-seeking focus that conflicted with managers' professional identity to deliver high quality and to maintain a certain level of expertise (logics of professionalism) and likewise managers' expertise and tacit knowledge conflicted with safety rules and procedures (logic regulation) that were believed to be static and rigid.

In such cases of experienced conflict, managers complained to shift responsibility or to deal with criticism allowing them to demarcate themselves from actors representing a different logic. They also positioned themselves in certain ways, for instance as non-police officers or trouble-shooters with a pragmatic eye towards meeting various competing objectives. Thus, managers may position themselves as trouble-shooters, enforcing safety regulations ad-hoc in one situation, and turn a blind eye to adhere to values of efficiency in other situations. That corroborates with studies, which show that managers' identity configurations change depending on the situation and context (Bresnen, Hodgson, Bailey, Hassard, & Hyde, 2019), echoing Smets et al.'s (2015) 'segmenting' of competitive logics. Thus, complaining and positioning exemplify how managers separate practices governed by competitive logics.

Practices that influence competitive relations

I found that complaining and positioning are both micro-level practices that facilitate competitive relations among the three identified logics as they trigger the separation between practices. Previous studies applying an institutional logics perspective on safety management have illustrated the co-existence of multiple and often competing logics (Dyreborg, 2011; Madsen and Hasle, 2017; Uhrenholdt Madsen and Waldorff, 2019; Hasle et al., 2021; Jia et al., 2017, 2019). I extend their findings by showing how actors within organizations navigate these barriers and influence competitive relations among logics by enacting specific practices in their everyday work. Hence, complaining and positioning influence the constellation of logics found in my data as they nurture the (re)production of competitive relations among logics.

I found that both managers and workers use the mundane practice of complaining as a tool to negotiate safety on site and to influence safety collaboration by drawing on their occupational boundaries. Complaining nurtures oppositional relationships between managers and workers (Andersen et al., 2015, p. 646), hampering collaborative safety practices across different occupational groups. Complaining designed to change working conditions reinforces current conditions and enhances separation between different organizational groups as it can bring into focus their differences in perspectives, goals and values. For instance, adherence to the logic of professionalism meant that actions, which did not recognize the expertise of managers, were not even considered during coordination meetings with workers.

Likewise, I have shown that the way construction managers position themselves and others has implications on their motivations to integrate safety in their daily operational work. My findings indicate that their positioning acts are mostly used to solve conflicts and navigate the competitive relations among multiple demands or logics. For instance, managers position themselves in certain ways depending on the situation enabling them to separate practices that belong to seemingly different spheres or logics.

Thus, both complaining and positioning enables managers to enact competitive logics simultaneously. However, both practices also constrain managers' ability to reconnect separated practices, thus integrating safety into operations.

Cooperative relations among logics enable safety integration

As mentioned above, managers mostly separated their practices of safety management and managing everyday operations by over-prioritizing one logic over another or by segmenting competitive logics,

due to persistent tensions between the three identified logics. However, similar to other studies (e.g., Waldorff et al., 2013; Hasle et al. 2021), I found also *facilitative relationships* among the three identified institutional logics that enabled the integration of safety into other operational tasks.

Facilitative relationships

I found facilitative relationships between logics that can enable safety integration. With such relationships, strengthening one logic serves to strengthen another logic. In my cases, I saw that cancelling contracts with non-compliant subcontractors (strengthening regulation logic) to encourage other project partners to align their behavior (be compliant with safety legislation and focus on safe work conditions) led to strengthening both the logic of production and professionalism. This is because the main contractor conveyed social responsibility with safety and thereby subcontractors were motivated to keep good relations with the main contractor by ensuring optimal work conditions for workers that would also keep production running smoothly and thus, maximize profit in the end. This regulation-driven approach was thought to encourage subcontractors' behaviors, but it was also resulting in positive outcomes for workers' delivery of high-quality work (strengthening logic of professionalism) and the main contractors increased their own reputation as highly integer to attract new customers (strengthening the production logic).

This reflects the increasing focus on workers' well-being as part of companies' sustainability efforts (Ehnert, Harry, & Zink, 2011) found within safety management. Here, optimized conditions for workers may 'translate into better performance as workers achieve a higher level of well-being and a higher commitment to their job' (Hasle et al., 2021, p. 6). Similarly, operation management scholars have pointed towards the necessity of focusing business on social sustainability to secure long-term economic profit and survival (Croom, Vidal, Spetic, Marshall, & McCarthy, 2018; Longoni & Cagliano, 2015; Shevchenko, Lévesque, & Pagell, 2016).

Practices that influence cooperative relations

Similar to other studies (e.g., Smets et al., 2015) I have shown how construction managers were able to bridge seemingly competitive logics in their daily work activities in few instances. Bridging means that managers reconnect separated practices and integrate aspects of one logic into situations or locations dominated by the other. Thereby, managers connect logics depending on situational demands and facilitate cooperative relations through bridging. I discerned the mechanisms that trigger the bridging of these logics: managers drew on their practical understandings based on their professional expertise to make situational judgements, dynamic decision-making and used their

collaborative relational network. Importantly, bridging competitive logics and thus, facilitating cooperative relations were possible, because construction managers were able to separate practices that were governed by different logics or segmenting competitive logics. For instance, managers bridged the logic of production and professionalism by drawing on their professional relational network and thus, getting the newest gossip on potential project partners. Managers would, for example, use gossip stemming from their relational network with other peers to adjust their contracts in the office. Hence, contracting is a production-oriented task that occurred at the office and gossiping with peers is a task happening within a professional community. Managers openly ascribed to these separated practices, using their outputs in the enactment of the other. In this case, the manager gains new information concerning subcontractors' former safety behaviors and imports this output into the contracting to adjust this practice. Importantly, managers trusted their own professional expertise to both separate logics and import outputs from one logic into their enactment of the other. They did so fluidly during their workday, following their own judgment of the situation.

Compared to previous studies within safety management applying the institutional logics perspective that have shown their competitive relations (Dyreborg, 2011; Uhrenholdt Madsen, 2017; Uhrenholdt Madsen & Hasle, 2017; Uhrenholdt Madsen & Waldorff, 2019) and to some extent their potential cooperative relations (Hasle et al., 2021), I show how organizational actors' micro-social practices influence facilitative relations among logics. Hence, I show how actors enact complementarities within organizations. These findings create highly relevant knowledge of how and in which situations individual actors facilitate such potential combinations and even synergies and may highlight the blind spots of the current mainstreaming process to support actors' integrative efforts within organizations. However, bridging occurred only in few instances and only few managers with extensive professional experience and a collaborative relational network managed to reconnect different practices.

Second, my study contributes to a fuller understanding of safety management as an emergent and dynamic aspect of work characterized by an ongoing balancing of multiple institutional logics in everyday work. Drawing on the classic and pioneering work of Rasmussen (1997), this dissertation advocates for an understanding of safety as being in direct interaction with a dynamic work setting in which people continuously make dynamic situational adjustments to their practices as part of their normal work. However, drawing on the literature on the intersection of institutional logics (Friedland & Alford, 1991; Thornton et al., 2012) and organizational hybridity (Battilana et al., 2017), my conceptualization of how a dynamic safety management is accomplished on the micro-level by

organizational actors advances the binary either-or understanding of safety in the contemporary safety management approaches (Hu et al., 2020).

In contrast, I advocate for embracing seemingly competitive elements that can even support each other, because organizational members are able to navigate both competitive and cooperative relations among such seemingly competitive elements or logics. I advance the conceptualization of safety management by exploring the relationships among logics (Goodrick & Reay, 2011; Greenwood et al., 2010, 2011; Reay & Jones, 2016; Smets et al., 2015, 2012; Waldorff et al., 2013). Prior studies within safety management have focused on illustrating the co-existence of institutional logics as competing (Uhrenholdt Madsen & Waldorff, 2019). For instance, Dyreborg (2011) showed that after a shift from the domination by first the logic of state and then the logic of democracy in the Danish work environment field, a new dominant logic of the market gave rise to new and more market-oriented approaches to the governance of the Danish working environment. Uhrenholdt Madsen and Waldorff (2019) identified the three existing institutional logics of advocacy, compliance, and commitment in the field of working management in Denmark that prescribed competing practices of how safety is managed in Danish companies. Likewise, Hasle et al. (2021) show incompatibilities between the two dominant logics of risk for safety management and efficiency for operations management that translate into differences in goals and rationales behind practices within organizations.

Yet, in my analysis, I show that the relationships among logics are not necessarily competitive, they can also be cooperative. On the one hand, I see that in my three cases, seemingly competitive logics were reflected in practices because of segmenting or separating practices, which means that a particular practice is guided by a particular logic. Hence, my findings show how practices were developed that facilitated competitive relations among logics (*over-prioritizing one logic* and *segmenting competitive logics*), constraining safety integration. On the other hand, similar to other studies within the literature on constellation of logics (e.g., Goodrick and Reay, 2011; Waldorff et al. 2013), I see practices were developed that were able to enact logics in a particular way as when one logic was strengthened this reinforced another logic (*facilitative relationship*) and thus, enabled safety integration.

The notion of institutional logics and organizational hybridity enabled me to unpack the facilitative relations between seemingly competing logics that construction managers enact in everyday work. Understanding safety through the lens of institutional logics provides a theoretical pathway for

identifying distinct local rationales across the three organizational contexts, each of which provides its own coherent rationale for enacting safety (Thornton & Ocasio, 2008). Furthermore, a practice-driven approach to institutional logics foregrounds the collective performance of institutions through 'situated, emergent and generative practices' (Smets et al., 2017, p. 3) and draws attention to organizational members doing ordinary work. Hence, this approach portrays construction managers as 'stumbling people, acting at times out of their ambiguous interests' (Zilber, 2021, p. 231) yet also capable of bridging safety and production by making situational professional judgments.

Recently scholars advocate for more flexible, agentic, and processual approaches towards managing hybridity compared to existing approaches that focus on organizational, structural and static solutions (see, e.g., Gümüsay et al., 2020). Within construction management, Gottlieb et al. (2020) shows how 'strategic partnering' is one example of an emerging hybrid organization in the construction sector suggesting an emergent process of logic blending compared to previous studies, employing the concept of 'trading zones' to show how hybrids entail a blending or segregation of logics over time (2020, p. 618). In line with their thinking, my findings suggest a dynamic more flexible approach towards safety management (*The seesaw of safety management*) that complements existing understandings of safety management that tend to choose between the different alternatives in order to alleviate conflict and uncertainty, although the tensions will resurface (Smith & Cunha, 2020).

Thus, the seesaw approach towards safety management suggests focusing on the dynamic relationship between co-exiting logics that is facilitated by the constant balancing of separating and bridging practices. Due to the construction sector's contextual conditions of a high occupational fragmentation, ever-changing work conditions, short-term project organizations and a relatively high risk of accidents compared to other Danish industry sectors, a dynamic approach may embrace potential inherent tensions and facilitate potential synergies.

Finally, my study contributes to a deeper understanding of the role of construction managers' professional identities in the changing of safety management strategies. Importantly, I show that multiple institutional logics are inherent within organizations, and thus influence both managers' practice and identities. In line with the previous research, I show that managers' identities are important for managerial practice (Bévort & Suddaby, 2016; Brown & Phua, 2011; Brown, 2015; Joffe & MacKenzie-Davey, 2012; Noordegraaf, 2007; Phua & Rowlinson, 2004). Research on occupational safety and construction management has depicted construction managers' identities as coherent and based on gendered ideas of masculinity, freedom and independent work (see, for

example, Hayes, 2002; Löwstedt & Räisänen, 2014; Löwstedt & Sandberg, 2020; Ness, 2012; Polesie, 2013; Raiden, 2016; Styhre, 2011; Sveningsson & Alvesson, 2003; Thiel, 2012, Sandberg & Löwstedt, 2021). In contrast, the research on engineers suggests that professional hybridity may be especially welcome in this profession (Adams, 2020; Bresnen, 2013; Brint, 1994; Lipartito & Miranti, 1998), and previous studies in the healthcare sector have shown how new task assignments prompted the emergence of new expert knowledge and consequently a new professional identity (Madsen, 2015; Pedersen, 2013).

Previous studies on safety and construction management (e.g., Andersen & Grytnes, 2021; Grytnes et al., 2020; Sherratt & Ivory, 2019) have pointed out that workers or 'those on site' (Sherratt & Ivory, 2019, p. 2925) are all too aware of the fluidity and flexibility of safety in practice as part of their lived experiences. My findings elaborate on these insights by illuminating how construction managers or those off site are also aware of the dynamic and situated nature of safety. Although, managers were able to bridge logics and thus, integrate safety into other operational tasks because of their situated judgements and professional experience, their professional self-understandings mainly constrained such integrative practices. My empirical findings show that managers need an alignment between their professional identity configurations and practices to balance safety management. Currently most of my informants were not able to bridge competitive logics. Instead, they would rather over-prioritize one logic or segment competitive logics.

In relation to the aforementioned risk of atomatization of safety tasks (Uhrenholdt Madsen et al., 2019) as potential paradoxical consequence of the safety mainstreaming process (Hasle et al., 2019), my findings empirically support atomatization as a risk for safety integration. Safety tasks become more segmented into other staff departments inside the organizations and organizational actors without 'institutional closeness' to the safety management field (Uhrenholdt Madsen et. al, 2019), are increasingly in charge of parts of the safety efforts inside the organizations. In my cases, construction managers were supposed to work with safety and health-related issues in terms of complying with safety legislation and the company's efforts to mainstream safety (e.g., performing workplace risk assessments, documenting, and reporting incidents).

However, they mostly perform production-related activities as these lie at the core of their education, career path, and normative orientation (Löwstedt & Räisänen, 2014; Styhre, 2011). This reflects their identified positioning acts and lack of engagement in safety-related work. My findings show that their positioning implies that these managers' professional identities only encompass safety management

to a limited extent. Instead, they were not comfortable exercising extensive negative control over their employees (e.g., enforcing safety rules) and preferred to compromise on safety-related responsibilities. This suggests that safety management remains an administrative assignment and is seen as boring, time-consuming, and rigid. Thus, managers perform parts of safety management that fit their practical realties and professional self-understandings. Thereby, safety management becomes segmented and constrains safety integration.

Although I support the potential risk of atomatization, I do not see it only because of the ongoing mainstreaming process, but also as already existing within the organization. In my cases, managers' professional selves seem to have a bigger influence on safety management performance than the construction companies' mainstreaming efforts. Hence, my findings generate the following key insight: to implement safety integration into construction project organizations and their members' micro-practices, I suggest addressing construction managers' identity transition or development and a focus on initiating safety mainstreaming as a bottom-up process.

Practical and Empirical Contributions

Having discussed the theoretical contributions of my study, I will now present its practical and empirical contributions that are relevant to organizational practitioners and other actors related to occupational safety and safety management.

Firstly, this dissertation highlights the constructed nature of occupational safety covering multiple meanings and associated practices, which has practical implications. In paper 1, I apply the institutional logics perspective to identify three distinct logics present in my organizational contexts, each of which provides its own coherent rationale for enacting safety (Thornton & Ocasio, 2008). Thus, these different logics, with their associated meanings and practices, vary and often contradict each other, resulting in tensions when enacting safety at construction sites. By understanding these different logics, practitioners can design targeted organizational campaigns and safety promotion initiatives accounting for the multitude of safety understandings and practices. These insights can also expand our understanding of why interventions and policies are difficult to implement in a sustainable way in such complex work settings. The construction managers in this study enacted the identified institutional logics in different situations; thus, in both a competitive relation and in other instances, the logics co-existed and even supported each other.

Thus, it is important to know the institutional, organizational, and individual conditions that trigger construction managers' experiences of conflict, and their bridging abilities. In paper 1, I discern the

conditions that enable construction managers to develop the capability to bridge and thus to integrate safety into their everyday work tasks. For instance, support from such managers' superiors and peers, professional experience and relational qualities seem paramount for bridging safety and other demands in their daily activities. In line with these findings, Pagell et al. (2014) claim that a supportive culture is an important condition in which accountability for safety is distributed to all the organizational members, including the operations managers. Thus, practitioners may provide managers with direction to balance competing demands by focusing on the existing work relations among the project participants. Knowledge of managers' traits and managerial practices should perhaps be considered when designing and planning construction projects. Furthermore, Pagell et al. (2014) cited joint management systems as conditions for safe production. This is also supported by Hasle et al. (2021), who draw attention to the new ISO 45.001 certification, which can be an important step towards 'additive constellations' (2021, p. 6) strengthening both the productive and safety capabilities of organizations.

Secondly, this study provides a boundary work analysis that has practical relevance as it may enlighten practitioners regarding why and how managers and workers purposefully handle and underscore their differences regarding safety, and thereby enhance safety collaboration. For instance, safety professionals can apply the complaining typology when performing analyses of safety barriers or preparing safety interventions directed at improving managers' and workers' safety collaboration, such as by focusing on the communication aspects and relational dynamics in trainings to sensitize the managers to their peers' and subordinates' needs and preoccupations expressed by complaining. Trustful work relations between managers and subordinates can lead to a departure from the practice of solely applying control and command approaches and to the embracing of joint engagement. Here, construction managers have the responsibility of coaching and guiding the workers instead of controlling them. Provan et al. (2018) also cite the need for strong social relations among the different stakeholders to achieve better integration of safety management with operations management.

However, my findings highlight the need for clients to assess contractors from a broad perspective, including their abilities to build a cooperative project environment and establish arenas for safety collaboration. Thus, a stronger and more active engagement of clients seems necessary to both demand contractors' social responsibilities and to support safety professionals' work and employees' demands for safety. This is in line with other scholars (Forman et al., 2011; Gottlieb et al., 2020) that

have highlighted strategic partnering as new collaborative form that creates potential synergies with construction safety management.

Thirdly, in this dissertation, I discuss the roles of construction managers to advance the understanding of occupational safety. The value that such managers place on autonomy, discretion and flexibility leads me to suggest safety management approaches that account for managers' situated dynamic safety practice. The construction managers I met in the course of my study were not enthusiastic about integrating safety into the other daily operations. Safety management only meant yet another organizational assignment that is only to a very limited extent part of managers' professional identities. My study has shown that safety is dynamic and fluid due to managers' lived experiences as part of their everyday activities. Thus, I suggest that organizations that want to support their organizational members' efforts to beneficially combine safety and their other operational tasks start by focusing on the experienced tensions and challenges that matter most to their organizational members. This involves commitment to listen to the construction managers' voices and to motivate construction managers by letting them enact safety more creatively (e.g., involving them, along with the workers, even more in dynamic decision making, giving them time for reflection and learning). In line with this, Sherrat and Yvory (2019) propose the concept of 'situational self-organising' of safety management within the construction workforce (2019, p. 2523).

Finally, to transform construction managers' understanding of what makes construction managers successful, I suggest that their professional expertise concerning occupational safety be increased, such as by promoting safety and health-related education that can be part of future construction professionals' vocational and academic training, but also through other courses, workshops, or continuing educations. Currently, the first academic education for safety management at the university level will be open for safety professionals (Uhrenholdt Madsen et al., 2019). My findings, however, show that we have to address managers' professional self-understandings to provoke identity transitions towards a shared professional ethos that includes safety (and health). Early education at school and later at work targeting safety management may be one way, but market-related approaches such as financial incentives (e.g., bonus payments for managers) may also be considered (Dyreborg, 2011).

Future Research Currents

The study reported in this dissertation was a qualitative case study (Stake, 1995, 2005) drawing on ethnographically inspired fieldwork in terms of qualitative data. As such, the study's empirical

findings are closer to accuracy than to generalizability even to the middle managers in other Danish organizations. However, I found relevant patterns in the form of institutional logics and associated practices across my three organizational settings, which may indicate similar patterns within the construction companies represented by my three case construction sites. Thus, these patterns may be relevant to the research on other organizational settings, such as other construction companies or other industries, to determine how common supportive relations between competing demands are.

Thus, I suggest that future researchers try to gain an empirical understanding of the immanent tensions faced by organizational members (e.g., professional autonomy versus regulatory stability) by studying safety in situ and in vivo in other settings and by applying similar theoretical and methodological concepts. This study offers an inspiration in that it shows how the researcher may gain knowledge and data on processes of ongoing safety practices while they are taking place. Thus, I argue that future research may benefit from determining how common facilitative relations between seemingly competitive demands are (integrating safety and operational practice) and what can be done to move construction managers and their organizations away from the thinking that working safely means being unproductive. The future research may focus on studying the changes in safety management through longitudinal ethnographic studies that allow safety to be captured as a drifting phenomenon, always in a state of becoming. Additionally, a focus on the paradoxical nature of safety includes a focus on the opposing elements, and the strength of this approach is found in the relation between the opposing poles rather than in a reliance on just one element or the other (Schad, Lewis, Raisch, & Smith, 2016). Thus, I suggest that more studies explore, challenge, and creatively apply theories on institutional logics within the fields of occupational safety and safety management to investigate the facilitative relations therein and to overcome the narrow focus on either-or solutions.

Furthermore, I argue that construction managers' relational skills and practical understandings (Schatzki, 2006) play a crucial role in their discretionary use of multiple institutional logics in their daily work. Further research should address questions on how such managers can develop relational and diplomatic qualities to further the collaboration within the oppositional and competitive relations among construction professionals. Previous studies that used the notion of 'paradoxical leadership' contributed to the development of knowledge about how managers can embrace contradictory organizational goals by improving their relevant competencies and skills (Grote, 2020; Waldman & Bowen, 2016). Additionally, I suggest that future research efforts be focused on the dynamic and situated nature of safety practice and the value placed by managers on independence, discretion, and flexibility. To transform construction safety management into more dynamic and flexible approaches,

we may have to give construction managers allowance to enact safety more creatively as part of their independence and freedom.

To explore the tensions and relations between demands, I chose to triangulate my data by applying multiple methods (i.e., observations, interviews, and documents) that supplemented each other. In adopting this approach, I was able to conduct research that included more details and nuances, which is crucial when trying to show the complexities associated with safety practice. To collect richer and more detailed accounts of construction manager's own constructions of safety, I was inspired to use interviews. Whereas each of the methods I used had limitations, such as interviews, which were themselves constructed situations that to a high degree were co-constructed by me as interviewer; everyday observations gave me the access necessary for studying safety practice while it is being constructed.

Finally, although the focus of the study reported in this dissertation was on occupational safety and not occupational health, my findings show that construction managers feel highly pressured, work long hours and experience stress and potential burnout (Lingard & Francis, 2004, 2006; Styhre & Josephson, 2006). Therefore, construction managers' work conditions should be taken into consideration in future studies.

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Paper 1: Understanding how managers balance the paradoxical nature of occupational safety through a practice-driven institutional lens*

Katharina N. Jeschke[a,b]

[a]National Research Centre for the Working Environment, Copenhagen, Denmark

[b]Department of Organization, Copenhagen Business School, Copenhagen, Denmark

Abstract

There is an increasing interest in integrating occupational safety into contemporary organizations' management systems for the continual prevention of work-related injury, ill-health, and death. However, we know little about the micro-processes of managerial safety practices, particularly in understanding how organizational members enact competing organizational goals in their everyday work activities. This paper examines the mundane day-to-day practices by which construction site and project managers balance seemingly paradoxical demands in their everyday work. Using a combination of observational, interview and documentary data collected from three Danish construction projects, this study shows how institutional complexity (logics of professionalism, production, and regulation) affects managers' safety-related thinking, motivation, and practice, and how managers beneficially bridge multiple institutional logics through: 1) Silent acknowledgment, 2) A collaborative relational network, and 3) Dynamic decision-making. The paper contributes to the literature on safety management by outlining how managers on the ground balance safety paradoxes and, thus, transcend either-or understandings of safety. These insights are highly relevant as they show concrete ways in which managers attend to competing demands simultaneously and how safety can be integrated into managerial safety practices.

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Understanding how managers balance the paradoxical nature of occupational safety through a practice-driven institutional lens

Katharina N. Jeschke *

National Research Centre for the Working Environment, Copenhagen, Denmark
Department of Organization, Copenhagen Business School, Copenhagen, Denmark

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ABSTRACT

There is an increasing interest in integrating occupational safety into contemporary organizations' management systems for the continual prevention of work-related injury, ill-health, and death. However, we know little about the micro-processes of managerial safety practices, particularly in understanding how organizational members enact competing organizational goals in their everyday work activities. This paper examines the mundane day-to-day practices by which construction site and project managers balance seemingly paradoxical demands in their everyday work. Using a combination of observational, interview and documentary data collected from three Danish construction projects, this study shows how institutional complexity (logics of professionalism, production, and regulation) affects managers' safety-related thinking, motivation, and practice, and how managers beneficially bridge multiple institutional logics through: 1) Silent acknowledgment, 2) A collaborative relational network, and 3) Dynamic decision-making. The paper contributes to the literature on safety management by outlining how managers on the ground balance safety paradoxes and, thus, transcend either-or understandings of safety. These insights are highly relevant as they show concrete ways in which managers attend to competing demands simultaneously and how safety can be integrated into managerial safety practices.

1. Introduction

There is an increasing interest in integrating occupational safety (and health)[1] management into contemporary organizations' other management systems for the ongoing prevention of work-related injury, ill health, and death (Bluff, 2003). In contrast, traditional approaches toward safety management view safety in direct competition with other organizational goals, such as efficiency or productivity (Rasmussen, 1997; Zohar, 2002, 1980). Such understandings toward safety management apply a dilemma perspective or an "either-or mindset" (Hu et al., 2020, p. 1), which may be considered problematic because they reinforce "adversarial relationships" within organizations (Hu et al., 2020, p. 1). Thereby, "safety often loses the battle when a trade-off is required with project costs" (Oswald et al., 2019, p. 1) or when "superiority" is given to operations management (Hasle et al., 2021, p. 1), leaving safety as a "side-car" problem (Frick, 1990), marginal to core business concerns and management functions (Bluff, 2003). Despite an increased understanding of safety and the apparent organisational and financial advantages of prioritising safety (Hasle et al., 2021; Pagell et al., 2014; Sousa et al., 2021), occupational incidents and accidents are still commonplace in contemporary workplaces (World Health Organisation and International Labour Organisation [WHO/ILO], 2021). In addition to the agriculture and transportation sectors, the construction sector has one of the highest mortality rates due to accidents at work (Melchior and Zanini, 2019). Recent studies within the safety literature advocate for an integrative approach concerning joint management system practices directed at both safety and operations (Hasle et al., 2021; Pagell et al., 2014; Tompa et al., 2016; Veltri et al., 2013). These scholars point out that organizations that integrate their management subsystems, experience beneficial effects in both operational outcomes, such as cost reduction (Lo et al., 2014), and safety outcomes (Tompa et al., 2016). Thus, investments in safety can also result in sizeable benefits for organizations, such as increased productivity, efficiency, and quality (e.g., Fernández-Muñiz et al., 2009). This set of ideas and

* Address: National Research Centre for the Working Environment, Lersø Parkallé 105, 2100 Copenhagen, Denmark.
E-mail address: kcj@nfa.dk.

[1] In this study, I focus on managers' occupational safety practices on construction sites (excluding property and environmental safety and occupational health). Although such managerial safety practices may also affect workers' occupational health, it is more difficult to uncover the more hidden nature of health compared to the visible concurrence of safety. Henceforth, I use the term safety practices.

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empirical results show that both safety and operational practices are complementary, and even synergistic at the organizational systems level (Pagell et al., 2014; Tompa et al., 2016; Veltri et al., 2013). However, integrating both safety and other operational goals within an organizations management system may not be sufficient, as the way in which an organization implements such integration depends on its members and, especially, on its leaders who often determine and implement strategies used to manage tensions in the workplace (Miron-Spektor et al., 2018). Thus, increased empirical knowledge on how managers integrate safety into their managerial day-to-day practices, e.g. including safety issues in briefings (e.g. Toolbox talks), may help us understand how to combine both safety and operations management in everyday business activities.

Yet, surprisingly little academic attention has been given to the micro-processes of managerial safety practices, particularly in understanding how managers within such organizations enact competing organizational goals in their everyday work activities (Barton and Sutcliffe, 2009). Within safety research, we lack knowledge on how managers combine operational and safety goals in their everyday managerial activities. For instance, site and project managers at construction sites must balance competing work-related practices that potentially risk employees' health and safety; here, they prioritize one goal over another (e.g., time over quality), limiting their gaze to solutions that they consider plausible and acceptable but that might compromise employee safety. For example, Oswald et al. (2019) show how construction managers tend to motivate workers to speed up work to finish the project when under production pressure. Such choices may resolve the tension between safety and production goals temporarily, but this tension will resurface and calls for a "both-and management strategy" (which is explored in the text below; Hu et al., 2020, p. 2) as managers have to cope with every day tensions (Miron-Spektor et al., 2018). This triggers questions about mechanisms that may or may not foster managers' abilities to balance safety-related and other everyday managerial activities competently.

The construction industry is a particularly interesting context to examine how managers balance competing organizational goals, as construction project organizations must satisfy expectations of productivity and occupational safety compliance (Hasle et al., 2021) as imposed by market pressures and legal frameworks, respectively (EU OSHSA, 1989). To varying degrees, contemporary construction project organizations confront, with "institutional complexity" (Greenwood et al., 2011, 2010), the challenge of having to align their structures and practices with incompatible behavioural templates or "logics" (Friedland and Alford, 1991). In this line of thinking, institutional scholars have largely emphasized conflicts between competing logics and their representatives (Pache and Santos, 2010; Greenwood et al., 2011). Within safety research, the institutional logics perspective has been utilized in empirical analyses to study the fields of work environment management (Uhrenholdt Madsen and Boch Waldorff, 2019), heat stress management (Jia et al., 2019), operations management (Hasle et al., 2021), as well as client and construction supervisor practices (Cornelissen et al., 2020; Lingard et al., 2019). Thus, we know a lot about how logics are differentiated and that competing logics impose barriers for safety management (Hasle et al. 2021).

Recently, however, studies have shown that institutional complexity can have beneficial effects as so-called "hybrid" organizations (i.e., organizations that incorporate competing logics) may balance competing demands (Pache and Santos, 2013). For instance, studies on the microfoundations of institutional logics have shown beneficial relationships among logics. Waldorff et al. (2013) viewed how logics have both competitive and cooperative relationships, which enable action in healthcare. Similarly, Smets et al. (2015) illuminated how individual actors in the insurance sector fruitfully combined seemingly incompatible logics in everyday work. Within safety management, Hasle et al. (2021) identified potentials for additive constellations between risk and efficiency logics. Yet, we lack insights about how coexisting and even competing logics within construction project organizations may nourish each other, and how organizational members may drive such integrative efforts. Such insights create highly relevant knowledge for safety management research as competing logics may be complimentary or even shape synergies and innovation.

From an institutional logics perspective, this article aims to analyse how managers balance competing organizational goals in their everyday work in an environment with multiple institutional logics. To contribute to and further develop a "both-and" understanding of how managers may balance seemingly unresolvable tensions between multiple logics, I draw on a "paradoxical" understanding of occupational safety (Hu et al., 2020, p. 1). Given the lack of insight into how organizational members integrate occupational safety into other work practices, it is both theoretically interesting and practically relevant that we understand how people in those organizations can balance competing logics so that the practices they prescribe stimulate, rather than undermine, each other to enhance occupational safety and organizational performance jointly. Thus, I ask: *How do construction site managers beneficially combine competing institutional logics?*

To examine how mutually "dependent yet also contradictory" (Friedland and Alford, 1991, p. 250) logics can be beneficially combined, this paper reports on a qualitative case study of managers' everyday safety-related work in three complex construction project organizations in Denmark. Drawing on a processual and practice-driven understanding of safety paradoxes (Langley et al., 2013; Schatzki, 2001), this study explores the mundane day-to-day practices by which construction site and project managers balance seemingly contradictory demands stemming from multiple logics. In this study, a combination of interview, observational, and documentary data is used to show a) how institutional complexity influences managers' safety-related thinking, motivation, and practice; and b) how managers beneficially combine multiple institutional logics.

The insights from this study contribute to the field of occupational safety by going beyond the predominant "either-or" understanding of safety. Instead, this study draws on the institutional logics perspective as a complementary "both-and" approach to understand and accept tensions and explain how managers can attend to competing demands simultaneously (Schad et al., 2016). Thereby, this article shows managers' work-related practices toward attaining the organizational goals of production, safety, and professional quality simultaneously. Discerning the mechanisms that trigger such balancing in managers' daily work activities adds to explanations of how safety paradoxes can be managed and how managerial safety practices can be integrated into other managerial practices.

This paper is structured as follows. First, I review the literature on institutional logics concerning occupational safety within construction project organizations. Then, the research context, ethnographic inspired fieldwork, and the analytical framework are introduced. Next, I present findings that outline the practices that enact and balance logics of professionalism, production, and regulation at construction sites. Finally, these findings and their implications for safety management and leadership are discussed.

2. Theoretical background

2.1. Conceptualizing the paradoxical nature of occupational safety

Paradox scholars emphasize the interdependence of opposing elements, describing them as continually informing the other in a dynamic relationship (Schad et al., 2016). Thus, this dynamic relationship suggests a processual perspective to understand how opposing elements continually inform each other as the tension between them is in a constant state of becoming (Tsoukas and Chia, 2002) and seemingly resistant to resolution. Smith and Lewis (2011) explain that paradoxes are inherent in organizational systems and often remain latent, becoming salient particularly under environmental conditions of plurality (i.e.,

multiple goals/demands or diversity of views, informed by multiple stakeholders), change (i.e., in work systems and environment), and scarcity (i.e., time and resources). Following this line of theorizing, Hu et al. (2020) suggest that managing occupational safety is inherently paradoxical because organizations attempt to (a) attain competing organizational goals (e.g., safety versus production), (b) manage ongoing contradictory processes to meet competing safety demands (e.g., stability versus flexibility), and (c) attend to multiple safety domains (e.g., staff safety versus client safety). Meeting these concurrent requirements simultaneously creates several tensions in the design and implementation of systematic safety management processes and in the micro-processes of managerial safety practices that underlie such organizing. For instance, collaborative safety practices between construction site managers and workers are considered essential in establishing joint safety engagement (Andersen and Grytnes, 2021; Grytnes et al., 2020; Jeschke et al., 2021b), yet collaboration conflicts with organizations' competitive bidding practices engendering contestation and different views on safety. For instance, Andersen and Grytnes (2021, p. 428) pinpoint that construction managers understand and operate safety "rationally" in a top-down control-oriented manner whereas workers understand and operate safety "intuitively" and workers stress the need for improvisation in unprecedented situations. Another safety paradox includes the safety versus production goals conflict (Hasle et al., 2021; Oswald et al., 2020) which has also been described as protection versus production goals conflict (Wang et al., 2016). Additionally, recent literature on safety management centres around the question of how best to manage co-existing demands for stability and flexibility (Grote, 2015). For instance, high-risk organizations operate in an uncertain and constantly changing environment, which requires them to function both reliably and consistently as well as being responsive to change. Therefore, managing occupational safety is paradoxical as it contains apparent interdependent contradictions, emphasizing the ongoing tensions within safety-production, stability-flexibility, and collaboration-contestation relations. Demands on management thus shift from a more conventional emphasis on control-oriented decisions and solutions toward a dynamic, ongoing process of "coping with" (Handy, 1994) or "working through" (Lüscher and Lewis, 2008) paradoxes.

2.2. Understanding safety paradoxes through the lens of institutional logics

Institutional logics have been broadly defined as a social domain's "organizing principles" (Friedland and Alford, 1991, p. 248) or "rules of the game" (Thornton and Ocasio, 2008, p. 112). They provide actors with common frames of reference or "cognitive maps" to "guide and give meaning to their activities" (Scott et al., 2000, p. 20). They are woven into regulatory structures, organizational forms, and social norms and specify which issues should be considered important, which ends should be pursued, which means should be employed, and which standards should be used to define success. Friedland and Alford (1991) proposed that logics are composed of more abstract aspects (e.g. cognitive schema and normative expectations), as well as material aspects (e.g. material structures and practices) (see also Thornton & Ocasio, 2008). Thus, institutional logics are "both material and symbolic – they provide the formal and informal rules of action, interaction, and interpretation that guide and constrain decision makers in accomplishing the organization's tasks." (Thornton and Ocasio, 1999, p. 804). They determine what comes to people's attention, commending meaning to practices and what is perceived as legitimate in a given situation (Thornton et al., 2012). Thus, logics act as a jumping-off point for decisions and actions (Thornton and Ocasio, 2008).

There are distinct logics present in different organizational contexts that each provide their own coherent rationale for enacting safety (Thornton and Ocasio, 2008). Analysing safety paradoxes through the lens of institutional logics provides a theoretical pathway for understanding the underlying local rationales that inform actors' understandings, choices and practices towards safety management, and why they may hinder or trigger closer integration between safety and other operational goals. As such, safety management should not be viewed as a distinct logic, although logics on different levels (e.g., societal, field-level, and within organizations) can be used to explore and explain safety-related issues (Hasle et al., 2021; Lingard et al., 2019; Madsen and Hasle, 2017). Contemporary organizations encounter "institutional complexity" (Greenwood et al., 2011, 2010), the challenge of having to align "incompatible prescriptions from multiple institutional logics" (Greenwood et al., 2011, p. 317), thus risking clashes between actors representing competing logics (Pache and Santos, 2010). Within construction and safety management research, such clashes have been noted when a focus on on-site production becomes a barrier to achieving safety goals (Han et al., 2014; Mackenzie and Loosemore, 1997). Previous studies applying an institutional logics perspective on safety and safety management have illustrated the presence of state and corporation logics (Cornelissen et al., 2020; Dyreborg, 2011; Madsen and Hasle, 2017; Uhrenholdt Madsen and Boch Waldorff, 2019) and investigated incompatibilities between risk and efficiency logics (Hasle et al., 2021), market and profession logics (Cornelissen et al., 2020), and production and protection logics (Jia et al., 2019, 2017). For instance, Hasle et al. (2021) explained why safety management maintains its persistent marginal function, compared to operations management in contemporary organizations, as both fields are dominated by the conflicting logics of risk for safety management and efficiency for operations management. Cornelissen and colleagues (2020) identified tensions between the market and the profession logic as the former emphasizes individual self-interest to increase efficiency and profits whereas the latter emphasizes high-quality work and personal expertise. Additionally, they noted market-corporation incompatibilities between managers' efficiency-seeking behaviours and their commitment to upholding the firm's position in the market (Cornelissen et al., 2020). For example, the firm's goal of complying with external safety demands to maintain legitimacy and legality collides with competitive bidding practices or self-interested clients.

As these examples suggest, the potential overlaps between multiple logics constitute a strong case of institutional complexity. These logics may drive managers' safety-related decisions and practices and are assumed to enhance tension between safety and other organizational goals (Hasle et al., 2021; Jia et al., 2019, 2017; Nordlöf et al., 2015; Oswald et al., 2020; Saunders et al., 2016). In this way, institutional complexity may limit actors' attention to an either-or choice between safety or other goals as they prioritize one logic over the other. These studies are in line with institutional scholars who have largely emphasized conflicts between competing logics and their representatives (Greenwood et al., 2011; Pache and Santos, 2010).

Recently, however, studies have shown that institutional complexity can have beneficial effects (Hasle et al., 2021; Pache and Santos, 2013; Waldorff et al., 2013). For instance, Smets et al. (2015) illuminate how individual actors in the insurance sector effectively integrate seemingly incompatible logics in everyday work by identifying three balancing mechanisms—segmenting, bridging, and demarcating. As different logics provide different ideas about safety, uncovering such different ideas may provide new knowledge on the paradoxical nature of safety (Hu et al., 2020) and identifying how such paradoxical rationales can be embraced in everyday work may help create safer workplaces. To extend our understanding of how individuals balance safety paradoxes on construction sites, I draw on Smets et al.s' (2015) balancing mechanism of bridging.

2.3. Applying a practice-driven institutional perspective to safety paradoxes

To expand our understanding of the paradoxical nature of occupational safety, this study foregrounds a dynamic and situational understanding of how individuals experience institutional complexity and,

thus, draws on a processual and practice-oriented understanding of safety paradoxes (e.g., Schatzki et al., 2001). In contrast to scholars that have focused on organizational responses to institutional complexity (Greenwood et al., 2011; Pache and Santos, 2010), my analysis focuses on the "mundane practices by which individuals dynamically negotiate institutional complexity at the 'coalface'" (Smets et al., 2015, p. 935). A practice lens on institutional complexity provides a dynamic understanding of how individuals balance competing logics within the organizational structures they inhabit (Smets et al., 2015, 2012). Thus, an understanding of how site and project managers may balance institutional logics needs to consider how individuals competently balance situations in which different logics collide. As such, this study draws on Smets and colleagues' practice-driven approach toward institutionalism (2017), in which Schatzki's notions of "practical" and "general understanding" (Schatzki, 2006, p. 1864, 2002, p. 77) are leveraged. Schatzki defines a practice as "an organized constellation of actions" which is informed by individuals' practical and general understandings (Schatzki, 2002, p. 71). General understanding or logic comprises individuals' collective notion of the appropriateness of specific actions in a given context while practical understanding comprises individuals' personal, tacit know-how to perform specific actions competently which they consider applicable to a particular situation in which different logics may collide. A general understanding or logic is complimented by a practical understanding that "allows individuals to skilfully balance situations in which different general understandings appear pertinent" (Smets et al., 2017, p. 28). Such situational and dynamic understandings of combining practices are based on a process ontology (Langley et al., 2013) in which institutional logics "are not fixed in some structural order but are continuously and flexibly instantiated in the momentary processes by which individuals adjust to any given situation" (Smets et al., 2015, p. 937). As such, a processual and practice-driven institutional approach provides a highly relevant lens to study safety paradoxes as it acknowledges underlying ongoing tensions and "promote[s] a 'paradoxical mindset' that accepts simultaneous goal achievement" (Hu et al., 2020, p. 3).

3. Methods

3.1. Research setting and participants

I studied site and project managers' everyday work regarding occupational safety management in three complex construction projects in the Greater Copenhagen area in Denmark between 2018 and 2020. Data were gathered from two large construction companies and one medium-sized company representing the three construction projects. Participants on the construction projects were the clients, turnkey contractors, various sub-contractors, and their respective sub-contractors (ranging from 13 to about 50 sub-contractors). Project sub-contractors delivered specific work tasks and represented specific trades such as plumbing, roofing, earth and concrete, installation, or painting. Additionally, many of the sub-contractors had their own project-based sub-contractors, which resulted in a long chain of diverse actors on-site. The respective turnkey contractors managed their construction sites, and on-site management was mainly internally employed but project-based deployed for the particular construction project (see Table 1 for an overview of the three construction projects).

3.2. Data collection

This qualitative case study of construction site and project managers' collective safety practices (Schatzki, 2006, 2002) draws on ethnographic methods (Pink et al., 2012) and is informed by previous ethnographic studies applying field observations, interviews, and documentary data differently (Baarts, 2009; Grytnes et al., 2020; Löwstedt, 2015; Oswald and Dainty, 2020; Thiel, 2007). In this study, previous studies inspired my fieldwork in the collection of observational data, interviews with site and project managers, and documentary data (reports from safety meetings and on-site inspection rounds) illuminating managers' collective daily practices (see Table 2 for an overview of the study participants).

Table 1
Overview of three construction projects.

	Construction site 1	Construction site 2	Construction site 3
Period	January–April 2018	April–June 2018	January–February 2020
Project type	Industrial building	Residential building	Residential building
Number of main-contractor white collar workers (managers, engineers)	40	5	20
Number of main-contractor blue collar workers	20	8	40
Client	End user of building (pharmaceutical company)	Public municipality	Public municipality
Number of sub-contractor blue collar workers on site	300	42	150

3.2.1. Field observations

This study captures site and project managers' safety-related work

Table 2
Overview of observed and interviewed site and project managers.

Study participants #	Training and educational background	Sex	Professional experience in years
Senior Project manager 1	Carpenter	Male	37
Senior Project manager 2	University diploma within construction engineering	Male	33
Senior Project manager 3	Concrete worker & university diploma within construction engineering	Male	29
Project manager 1	University diploma within construction engineering	Male	15
Project manager 2	Blacksmith & university diploma within construction engineering	Male	12
Project manager 3	Electrician	Male	18
Project manager 4	Carpenter	Male	17
Project manager 5	Concrete worker	Male	16
Project manager 6	Blacksmith	Male	15
Site manager 1	Carpenter	Male	2
Site manager 2	University diploma within construction engineering	Female	5
Site manager 3	University diploma within construction engineering	Male	4
Site manager 4	University diploma within construction engineering	Male	3
Site manager 5	Electrician	Male	6
Site manager 6	Carpenter	Male	8
Site manager 7	Joiner	Male	10
Site manager 8	University diploma within construction engineering	Male	10
Site manager 9	Electrician	Male	8
Site manager 10	Carpenter	Male	7
Site manager 11	University diploma within construction engineering	Male	3
Site manager 12	Carpenter	Male	5

practices "in the natural context of occurrence" (Adler and Adler, 1994, p. 378). I sat with managers in their offices, observed internal meetings, walked with them on-site to do inspection rounds, and watched their negotiations with peers and workers. Several site visits were carried out totalling 250 h of observation of daily work activities and situated interactions. The multiple site visits varied from three hours per day to, at times, two full workdays (8 h each) in a row for two to three months (on each project); thus, I was able to generate extensive field notes. I arrived at the office in the morning and observed site or project managers who had previously agreed to be followed. I often observed managers multiple times to follow up on previously observed work and, in quiet moments, I asked informants to reflect on their work. I also took part in formal safety and production meetings as well as site walkarounds with the respective local on-site safety managers, and I was able to walk around the site freely, talking to and observing what was going on amongst the managers and workers. An open research approach was adopted, where I plainly clarified safety was the topic of investigation. Compared to previous ethnographic studies within the construction industry (Baarts, 2009; Löwstedt, 2015; Paap, 2006; Thiel, 2012), my role in this case was that of a visitor and observer and only very few instances involved engagement in the daily work. I regularly talked informally with site managers in the office, at lunch, during on-site walkarounds, and in meetings. I captured most conversations in verbatim quotes, audio recording the fieldwork including meetings. Observations at the office and informal talk at lunch or on-site, including site walkarounds, were captured in verbatim quotes using written field notes. The setting did not allow recording in these instances due to background noise on-site and in the shared offices. Additionally, I did not want to draw unnecessary attention to myself by using audio recording. As such, writing notes on my laptop was more appropriate so that I could blend in at the office. The breadth and depth of this fieldwork revealed three indicators that suggest the practices observed were characteristic across the three construction projects, rather than just for one project (see also Smets et al., 2015). First, all 21 managers showed consistency in their practice across numerous instances and across all three projects in this study. Second, each manager interacted with multiple colleagues each day. Hence, when observing one manager, I recorded practices from their interactions with numerous others in the process. Third, the observed managers interacted with several other sub-contractor managers at the office or on-site, and, as pinpointed by Smets et al. (2015), I also noted the similarities in their practices. "Such dense networks are known to transmit and stabilize shared expectations of collective practice" (Smets et al., 2015, p. 938).

3.2.2. Interviews

In addition to numerous reflective conversations in the field, I conducted 21 semi-structured interviews with site and project managers that were audio-recorded and transcribed verbatim. I predominantly interviewed site and project managers but also six foremen, four safety managers, and two client representatives. Furthermore, I conducted two focus group interviews with workers for a broader understanding of the contextual setting. The interviewees addressed how managers perceive day-to-day work situations and the challenges they encounter in their work. They were also asked to describe a regular workday and to give detailed examples of when and how they integrate safety in their work practices. Interviews were further used to follow up on field note observations, receive immediate feedback on observations, and verify interpretations.

3.2.3. Documentary data

I collected documents from the three construction projects (e.g., reports from safety meetings and on-site inspection rounds, emails, meeting minutes, newsletters) and their respective companies (e.g., guidelines, standards, and internal campaigns). The documents captured projects and companies' work practices and governing logics, helping to validate the observational and interview data.

3.3. Analytical approach

The empirical data were systemized through organizing the empirical material in an NVivo database, and by employing a systematic coding approach (Gioia et al., 2013). The analysis relied on a process of adductive theorizing (Haedicke and Hallett, 2016). In this process, my initial insight originated from my empirical data, which I then coded, categorized, and progressively worked to a higher level of abstraction (Gioia et al., 2013). I reflectively engaged with multiple theories that might address or explain the paradoxical nature of safety and generate new theoretical insights iteratively from the interplay between my data and the literature. The empirical puzzle that grabbed my attention arose from site and project managers' acceptance of subordinates' safety violations, although managers were responsible for the enforcement of safety rules. Yet, safety violations ensured subordinates' safety on site. For instance, workers and managers alike take off their safety googles "to see" when walking on uneven construction site terrain (e.g., Löwstedt, 2015). To gradually move from inductive to adductive theorizing, data were considered in tandem with various theories, such as paradox theory, to explore which theory would best explain what was found (Gioia et al., 2013). After some data-theory iteration, I explored the coexistence of professionalism, production, and regulation logics as a theoretical framework to explain how seemingly competing activities were shaped by—but also shaped—the social order, which was observed across the three projects. To probe my empirical hunch, I wrote thick descriptions of site and project managers' typical work activities. Here, the aim was to display, in rich detail, the everyday practice as it might occur for any site and project manager. The empirical hunch was confirmed as site and project managers balance between the often-competing demands of making professional judgments, accomplishing production goals, and following safety regulations and that they do so in their everyday work, not only in exceptional decisions. These thick descriptions later provided the basis for relating the analysis' first-order findings as examples of site and project managers' workdays, comprising multiple representative descriptions of everyday work.

Drawing on these everyday practices generated through the fieldwork, I pursued two concurrent strands of analysis. In one strand, I coded all mundane practices observed in site and project managers' daily work, from "putting on a safety helmet" to "documenting work tasks", "lunching with peers", "coordinating activities", or "solving disputes". Following Gioia et al. (2013), I then clustered these identified practices into broader thematic categories. For instance, practices associated with safety management were assorted under codes such as "enforcing safety rules" or "instructing employees". Inspired by Smets et al. (2015), I considered the location where practices were being performed (e.g., site office, on-site, meeting) which seemed empirically relevant. Thus, I layered location codes across all work practices. For example, all administrative and analytic practices (e.g., negotiating offers with sub-contractors and suppliers, managing invoices, designing construction processes) always occurred in the office, I coded this category as "administrative work at the office". Likewise, I coded practices associated with walking inspections rounds and coordinating with workers, as "being on-site".

In the other strand, I used a method developed by Thornton et al. (2012a) to probe the empirical insight that observed practices enacted multiple logics of professionalism, production, and regulation. According to Thornton and colleagues, all logics can be operationalized, coded, and compared along their "elemental building blocks" (2012a, p. 54). To do so, the above-listed practices were cross-coded against the elemental building blocks of institutional logics found in the literature on safety management. For example, practices, such as "enforcing safety rules" or "instructing employees" resonated with "following regulatory frameworks" (Dyreborg, 2011; EU OSHSA, 1989) as a normative basis for individual behaviour, and with a belief in procedures controlled top-down by managers through hierarchical and formal structures as the basis of legitimacy. Other safety scholars have pinpointed a "logic of

compliance 2.0", emphasizing organizational reflexivity and self-regulation when complying with safety procedures (Madsen, 2017, p. 103). Here, I discern the logic of regulation as the normative basis because both individual behaviour and organizational legitimacy are characterized by following regulations.

Other practices, such as "ensuring profitability", "calculating cost-benefits", or "negotiating prices" reflected self-interested market behaviour, transactional exchange relations, and profit maximization as a basis for strategy, which are characteristic of the production logic (Jia et al., 2019, 2017). Additionally, practices such as "showing one's face on-site", "greeting workers", "ensuring quality" "solving problems ad hoc", or "getting workers to redo work" resonated with the quality of craft, personal reputation as a source of identity, and professional membership in a community as a normative basis. Thereby, site and project managers make situational judgments by drawing on their "nested understandings" (Schatzki, 2002) of what is safe, reasonable, and appropriate. Thus, both managers' sources of identity and their normative bases of behaviour and attention characterize the logic of professionalism. This step, therefore, confirmed that different practices were not only predominantly performed in specific locations, but also underpinned by different logics of professionalism, production, and regulation.

Having identified the coexisting logics of professionalism, production, and regulation and the practices enacting each of them, I abstracted further by arranging those assorted practices, which balance the relationships among the three logics into second-order themes. Inspired by Smets and colleagues' integrated model of "balancing conflicting yet complementary logics" (Smets et al., 2015), I use these second-order themes to explore specific situations in which these multiple logics were balanced and how site and project managers were able to combine the constellation of logics beneficially.

Some everyday practices of managers separated their workflow as practices enacting one or another logic were assigned to specific locations. For instance, site managers only performed production-oriented practices (e.g., invoice management, time planning, or economic calculation) in the on-site office. Conversely, regulation-oriented practices (e.g., walk inspection rounds, enforcing safety rules) only occurred on site. Therefore, I identified changing clothes, (e.g., putting on PPE such as helmets), moving between different locations (e.g., walking to/from on-site offices), and differentiating respective tasks (e.g., "calculating cost-benefits" versus "enforcing safety rules") as mechanisms for site managers to separate practices governed by different logics in their day-to-day work, allowing actors to maintain distinct logics by fluidly assigning their enactment to different locations.

However, observations contained many instances of managers openly ascribing to separated practices and using their outputs in the "other" location (see also Smets et al., 2015). Managers would, for example, use news stemming from their professional contacts with workers on-site to adjust their contracting in the office or use inspection rounds on-site to adjust their time planning in the office. Thus, the same managers who separated logics also imported outputs from one logic into their enactment of the other. They did so fluidly, following their own judgment of the situation, rather than a prescribed template. For example, they adjusted their contracting practices in response to news about specific sub-contractors coming from their professional network. It allowed individuals to bridge coexisting logics by drawing on their nested understandings (Schatzki, 2002) of how to act under each logic, and how to privilege one or the other at their own discretion in situations that entail elements of multiple logics.

Yet, the analysis also revealed practices that hinder bridging. They limited the extent to which each logic was imported into the enactment of another and, thereby, mitigated the over-privileging of one logic to the neglect of another. For instance, when pressured by peers in the office to proceed with work, managers would privilege production-oriented efficiency expectations to subscribe to production goals, although those goals deviated too far from being compliant with safety regulations. Similarly, managers would sometimes push back at colleagues if they felt they prioritized safety compliance over production goals, which might jeopardize the project's profitability.

4. Findings

First, I outline how the logics of professionalism, production, and regulation are enacted across three complex project organizations (see Table 3) and which ongoing tensions managers face in everyday work. Then, I present typical practices performed by site and project managers to show how these logics are balanced in practice. Here, I analyse specific situations through the lens of the study's theoretical framework to explain the mechanisms of bridging at play.

4.1. Enacting institutional logics on construction sites

4.1.1. Logic of professionalism

The professionalism logic's primary source of legitimacy is site and project managers' expertise, experience, and education as trained craftsmen. Managers emphasize their technical education and practical experience to determine when work activities are safe or risky. Safety is left to the discretion of the site and project manager who is thought to have the knowledge and ability to make skilled independent judgments of situations. For example, site managers trusted their own professional expertise when planning work activities to ensure subordinates' safety on site:

> *So, when I am planning a task, I remember to include safety in the planning. I think sometimes we come across certain tasks on-site, for example, when we have to hoist a window or you have to open the building's facade to get something in. And then, all of a sudden, someone is saying "well, you have to wear a safety harness", right? And then you have to find it somewhere on another construction site, right? So, if you get safety planned from the beginning […]. Then it's not that difficult, is it? If you have it in your planning. (Site manager)*

Site and project managers also trusted their professional expertise to make situational judgments on when to spend time enforcing safety rules or if these rules were "unnecessary things":

> *One must not go past such a thing [referring to workers' missing safety glasses]. But well, in such a situation […] I do not do anything. Because I have stood with an iPad and had to take a picture of a bug and then I have to take my glasses off … Well, something like that, I do not bother to spend time on unnecessary things. That's a bit how I see it. If I think it's unnecessary. So that's my own interpretation, isn't it? But I would rather stop something that is actually dangerous or can hurt [someone] over time. (Site manager)*

This quote shows how managers draw on their tacit knowledge and experience to make judgments of what is deemed appropriate in specific situations. These judgments are based on institutionalized practices of the managers' professional community that deem "taking off glasses" as not dangerous. The priority given to credible members of the professional community also engenders a logic of professionalism among site and project managers, which manifests itself in a strong professional relational network. Site and project managers often draw on their informal relations with peers, workers, or sub-contractors to stimulate collaborative work performance. Site managers' strong focus on professional expertise, situational judgments, professional membership, and informal relations matches the logic of professionalism.

4.1.2. Logic of production

The priority given to the project's profitability and managers' focus of attention on productivity engenders a production logic amongst site and project managers. For example, one of the site managers explained how important productivity is for the success of the project:

Table 3
Institutional logics applied to occupational safety and related managerial practices.

Logic	Defining characteristics of the logic	Application to occupational safety	Coded data of related managerial practices
Professionalism	Priority is given to the opinion of credible members of a professional community.	Occupational safety is left to the discretion of the individual manager.	*'finding compromise', 'being a friend', 'being diplomatic', 'negotiating safety'*
	Values are membership, expertise, training, and status in profession.	The organization structure of the profession is based on individual relations.	*'showing once face on site', 'greeting workers', 'gossiping with peers', 'having lunch with peers', 'joking around'*
	Success is a product of high quality and making appropriate judgments based on expert knowledge, socialized within their community.	Basis of strategy: Increase personal reputation.	*'ensuring quality', 'making decisions', 'showing technical knowledge', 'solving problems ad-hoc', 'guiding workers'*
Production	Priority is given to (client) choice, efficiency, and profit.	Occupational safety is considered an asset for gaining market share and gives the organization an advantage in client choice.	*'attracting the 'right' sub-contractor, 'discussing future project partners', 'keeping workforce morale high',*
	Values are competition, self-interest and customer preference.	Self-interest of the client.	*'satisfying the clients' wishes', 'competitive bidding', 'holding deadlines', 'speeding up work'*
	Success is a larger market share and profit.	Basis of strategy: Increase efficiency and profitability.	*'invoice management', 'time planning', 'ensuring profitability', 'calculating cost-benefits', 'negotiating prices', 'doing trade-offs'*
Regulation	Priority is given to predictability and compliance with regulatory frameworks.	Occupational safety is secured through following rules and procedures.	*'putting on PPEs', 'participating in safety meetings', 'follow up on work', 'controlling work performance'*
	Values are control, managerial authority, routines.	Compliance with rules and procedures is controlled top-down by managers.	*'enforcing safety rules', 'instructing employees', 'reprimanding workers', 'dismissing subordinates'*
	Success is	Basis of strategy: Following regulation through	*'taking pictures of*

Table 3 (*continued*)

Logic	Defining characteristics of the logic	Application to occupational safety	Coded data of related managerial practices
	following routines that are defined via regulatory frameworks and within the corporation to increase legality.	documentation, use of formal authority and performance management.	*safety breaches', 'walking inspection rounds', 'facilitating work assessments', 'coloring access paths'*

> *I just think that - the industry is simply so pressured. In relation to how huge a turnover [the company name] has, they make no money at all. It's an insane risk. And that applies to the entire construction industry. The thing is… you are just pressured, also as a worker, to the extreme to produce, right? Site management is too, right? It does not take much, then the house of cards falls apart, and then no money is made on a case, right? So, productivity is like … three underlines… that's what's in focus, right? (Site manager)*

Managers' efficiency-seeking behaviour is deemed appropriate to increase production goals as their "job is about getting things done and finishing the task", they "focus on progressing the project", and they adhere to keep up with tight time and budget schedules that stress efficiency as the way to accomplish production goals. Managers tease each other and workers by yelling "Hurry up, you're delayed". These aspects underpin actors' safety-related cognitions and actions. As such, safety is considered an extra task to be performed, traded off, or prioritized among the many production tasks on site. With regards to occupational safety on construction sites, the production logic is reflected in the use of safety performance as a means to increase consumer preference and market competitiveness. Under this logic, construction companies act like entrepreneurs that make customer satisfaction their primary goal.

> *It is very important to make a good impression on the client because our goal is to win the bidding for [name of a new construction project]. That's a project worth a billion Danish Crowns. (Project manager)*

Thus, safety becomes an asset for gaining market share and giving the organization an advantage in consumer choice. These aspects complement a need for construction companies' commercial behaviour and a focus on market competition that matches the targeted client satisfaction. Site managers' strong focus on productivity, the project's profitability, efficiency, and client satisfaction matches the logic of production.

4.1.3. Logic of regulation

The priority given to the company's internal safety rules and procedures and following these rules as a normative basis for individual behaviour engenders a logic of regulation. For example, a senior project manager explained how the company ensures following safety regulations on site by increasing workers' awareness:

> *Well, we had signs here that tell people how they should be dressed, and we also have signs that tell them how to behave. Now, we've put up a TV screen over there [pointing at construction site] that runs some slides. Alternatively, we run some reconstructions of accidents that have happened, and we then run them on the TV screen, so people become aware. And then, of course, we have this thing with the time out, where we kind of say: "Now just think before you go over and start to work". What do I have to be aware of here, to take care of myself? (Senior project manager)*

State- and corporation-based safety regulations have brought along supervision, documentation, and a reliance on excessive paperwork in

an attempt to provide robust evidence of safety management. Hence, managers secure safety through compliance with rules and procedures that are controlled top-down through the organization's formal structures in which workers have little input or engagement. Thus, safety documentation is experienced as time-consuming for site management and site rules are deemed inflexible. The usage of performance management tools and an emphasis on process control are in focus. Safety performance is measured, for example by reported incidents and accidents and is one of the organizational Key Performance Indicators (KPIs) that matches managerial work.

> *Every Friday morning at 8.30 am, site management meets up in the shared canteen to have breakfast and to share the latest news on the project's status. This weekly meeting has a fixed agenda and always starts with a presentation on the status of the project's KPIs [key performance indicators]. Today, [name of project manager] stands up and presents the KPI's and whether they are accomplished or not. The manager starts by shortly mentioning the number of reported incidents and accidents from last week and goes on with the numbers for paid and open invoices and requests for information. The presentation takes 2 min before the meeting continues. (Field note, 17th January 2020)*

Such KPIs differ across contemporary organizations and show that regulatory safety frameworks drive organizational responses on how to best prevent accidents and injuries. Site managers' strong focus on documentation, following procedures, use of formal authority, and performance management matches the logic of regulation.

4.2. Safety paradoxes in everyday site managers' practice

In this section, I present typical safety paradoxes that site and project managers face in everyday work. Safety paradoxes occur because organizations attempt to attain competing organizational goals (e.g., safety versus production) or to manage ongoing contradictory processes to meet competing safety demands (e.g., stability versus flexibility; see Fig. 1). Managers often struggle to attain multiple goals simultaneously and apply an either-or mindset to solve those underlying tensions in their work activities. As such, they over-prioritize one logic in lieu of another.

Under the production logic, safety practices are managed separately from managing operations, which generally leads to the prioritization of getting work done (production) over doing work safely (regulation). These priorities are often a reaction to an external environment pushing for lower costs and faster production, which leads organizational attention toward business cores instead of safety concerns. For instance, safety practices will generally not exceed meeting regulatory standards, as one of the site managers explains:

> *Well, safety regulation is the lowest common denominator. It's not forbidden to do more. It would be nice if regulation were this tiny stub one only steps over. We should be able to jump over, to fulfil minimal requirements. But sometimes that can be a challenge. (Site manager)*

Moreover, managerial safety practices are subordinate to getting work done even if formal safety processes are ignored or rules are broken. For instance, when pushed by peers to proceed with work, site managers feel pressured to focus on behaviours and strategies characterized by efficiency and productivity while neglecting to ensure workers' safety (and health):

> *We are under a lot of pressure right now. We have some deadlines and it will simply cost us DKK 58,000 a day if we haven't finished. So, sometimes I have to think, "Is it important right now that this man standing here and cutting with a machine and dusting the entire place, if it is only himself?" If three other men worked there, then I would not think it is fair to them…but if it's just him. This job has to be done and I know he will be done just in a few hours unless I reprimand him for not having a vacuum cleaner to put on his machine. It is damn hard to distinguish those things. For instance, my colleagues often say, "you can't just stop work – we are super busy". (Site manager)*

Under the production logic, the bases for action are geared toward efficiency-increasing behaviour to ensure a project's productivity. However, these production-oriented values often conflicted with actions prescribed by the regulation logic, as when site managers are expected to comply with organizational safety procedures:

> *Am obligated to put together these things so that my workers need not walk in mud, they must be able to pull a trolley and a wheelbarrow, that's basically it. (Site manager)*

Managers usually over-privileged efficiency-seeking behaviour and considered safety as a trade-off to achieve production goals.

> *I would never go away from someone, who potentially is in danger. Eh, but if they walk on an access footpath on the way over to their hut to have lunch and they do not wear their safety glasses, then it isn't me who will stop them. (Site manager)*

These contradictions are reinforced by the different control mechanisms that enforce both production and regulation logics. For example, informal controls sanction non-compliance with efficiency-based norms and promote group behaviour based on respected "celebrity" colleagues' behaviour (Thornton et al., 2012) maintaining organizational tenure or yearlong experiences and managers' fear of disrespect from their peers.

To sum up, site and project managers struggle to embrace the paradox of pursuing production goals while also ensuring compliance with safety regulations. Contemporary organizations are expected both to comply with safety legislation and ensure profitability. Thus, they funnel regulation and production logics in their organizational structures and practices, which generates potential overlap and might be one of the sources of the paradox that site managers are subjected to.

By contrast, under the regulation logic, safety procedures are implemented downstream and safety practices are managed with a top-down approach in which site managers experience safety rules as inflexible and safety documentation as time-consuming. For instance, site managers complained about inflexible safety rules like wearing a helmet at all times, even though they wished to grant workers flexibility:

> *Well, we have to paint everyone with the same brush, all the time. Inside, outside, good weather and bad weather. All the time. And I think that's a*

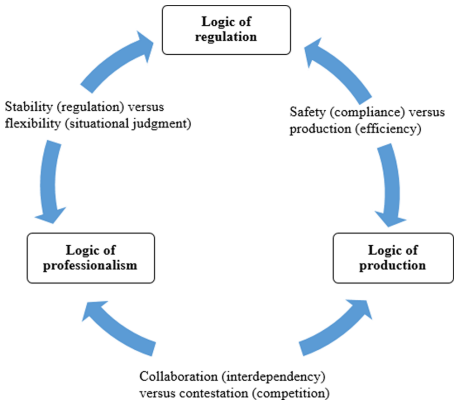

Fig. 1. Safety paradoxes in managers' everyday work.

pity. Because there has to be some space to be flexible. At least I think so. (Site manager)

Site managers are counted on to enforce safety rules with no exception, which leaves workers with little input and engagement. This creates conflicts and breakdowns in the relations between site managers and workers nurturing occupational boundaries and conflicting collaborative safety practices (e.g., Jeschke et al., 2021b). Moreover, the regulation logic conflicts with the logic of professionalism that focuses on managers' abilities to make flexible judgments depending on the situation at hand and to nurture professional relations to establish a collaborative work environment.

To sum up, site and project managers struggle to embrace the paradox of enforcing inflexible safety rules top-down and document safety performance on one hand while also making situational judgments based on managers' expertise and tacit knowledge on the other. The regulation logic represents stability in the form of fixed rules and procedures but conflicts with the logic of professionalism representing practical expertise, situational judgment, relations, and autonomy.

Under the logic of professionalism, managers follow principles that build their personal reputations among professional peers. For example, they are proud of using their expert knowledge to make situational judgments and of their diplomatic skills, for example, to negotiate successful collaboration with subcontractors. Site and project managers' attention toward their relational network and a normative base of collaboration conflicts with production-based competitive bidding practices among participants, as one project manager mentions:

I believe that it [contract management] is easier for international companies. When they see the contracts…they are used to them. They do not have a problem with contracts…the Danish construction sector [however] is still more relation-focused. Many agreements still happen by handshake. Without contracts. That does not work any longer if you have international participants who only are focused on the money and who are not interested in having a good reputation. (Site manager)

Managers also voiced difficulties about bridging competing demands stemming from both the logics of professionalism and production in their daily work. For instance, at the weekly production meeting, site managers complained about the projects' efficiency-seeking focus that conflicted with managers' professional identity to deliver high quality and to maintain a certain level of expertise.

Site manager 1 [addressing the project director]: "Maybe it's not the right place to ask, but we are crying for help downstairs to do our jobs professionally. It would be a good place to look there".
Project director: "I know. I am aware of it. But everybody is crying for help. We are loaded and we are busy. […]. We are different as people and have different levels of satisfaction with our work, for example, some of us are satisfied with 90%, others need 100% before they go on to the next task; it can't be always 100%".
Site manager 1: "You say the client is satisfied with us performing 90%. But what if we only can perform 80 or 70%?"
Project director: "I have to say, BUT. We have a budget and we must perform within a certain frame".
Site manager 2: "Yes, but is this the right thing to do? I want to develop myself. I need teamwork and, most importantly, I need you to cover my back. I lack competencies and experience for some tasks. We need help, not more work tasks laid on our shoulders". (Field note, January 2020)

To sum up, site and project managers struggle to embrace the paradox of collaborating within competitive relations. Under the logic of professionalism, they draw on informal relations, a normative base of collaboration and they value expertise and personal reputation. These aspects conflict with production-based competitive bidding practices and formalized relations via contract management and they focus on efficiency instead of quality.

4.3. Bridging professionalism, production, and regulation logics in everyday managerial practice

Even though managers experienced contradictions between the three logics at play and over-privileged one logic over another to solve conflicts, they still were able to bridge these coexisting logics in their daily work activities. Bridging means that site managers reconnect separated practices and integrate aspects of one logic into situations or locations dominated by the other. Thereby, site managers connect logics depending on situational demands. In the following section, typical practices performed by site and project managers are presented to show how these logics are bridged in practice. Here, specific situations are analysed through the lens of the study's theoretical framework to explain how managers beneficially combine multiple logics through three bridging mechanisms.

4.3.1. Bridging through silent acknowledgment

Site managers walk daily rounds on-site to check on work and coordinate activities with workers. In the following situation, the site manager used professional expertise and practical understanding not to reprimand a worker's missing personal protection equipment, but rather to give the worker space to react and straighten out without pointing fingers. The manager approached workers with silent acknowledgment by showing technical rather than safety regulation expertise when talking about work tasks.

Construction manager X walks the daily inspection round and meets three workers on the roof. They are cutting ventilation channels (made of tinplate) into big pieces, so that the channels fit together. One of the workers does not wear his helmet. During their conversation, the worker gets his helmet and puts it onto his head without saying anything. The manager does not mention anything either and keeps on talking about the work task. We keep on walking and the manager starts to explain that they were aware of the worker's missing helmet, but that they chose not to say anything. "The worker got his helmet without me telling him…because this guy knows". (Field note, March 2018)

Walking inspection rounds is a regulation-oriented practice and occurred only on-site. Therefore, I identified moving between locations (e.g., "walking to/from on-site office") and differentiating respective tasks (e.g., "planning of work activities" at the office versus "enforcing safety rules" on-site) as separated practices governed by different logics in managers' day-to-day work. Nevertheless, the above-mentioned site manager openly ascribed to these separated practices, using their outputs in the "other" location. The site manager trusted their own professional expertise not to reprimand the worker openly onsite, but instead, they talked about the scheduled work activities planned at the office. Thus, the same manager who separated logics also imported outputs from one logic into their enactment of the other. They did so fluidly, following their own judgment of the situation rather than a prescribed template by drawing on their nested understandings (Schatzki 2002, 2006). Here, talking about planned activities and not pinpointing the worker's misbehaviour ensured the subordinates' safety compliance. Thus, occupational safety is left to the discretion of the manager who is thought to have the knowledge and ability to make skilled independent judgments of situations (Cornelissen et al., 2020).

4.3.2. Bridging through collaborative relational networks

The next quotation exemplifies how site managers bridge both the logics of production and professionalism fluidly by drawing on their professional relational network. Managers would, for example, use gossip stemming from their relational network with other peers or previous peers to adjust their contracts in the office. Again, the same managers who separated logics also imported outputs from one logic into their enactment of the other. For example, they adjusted their contracting with potential sub-contractors that they had not yet worked

with in response to the professional networks' gossip on the subcontractor:

> *When we exchange experiences in that way, then it is very much about safety and orderliness and whether they [sub-contractors] clean up after themselves and such beautiful things. But then, I think that those [former colleagues] that I have worked closely with who, for one reason or another, are not on the project or in the company anymore (unfinished). We still have that … well, even though our companies are competitors, we are like, what to say, as engineers we're not competitors. So, in that way, it's quite common for us to call each other and actually exchange experiences, even though we no longer work together. Even if you are in another company. I think it usually works really well. (Site manager)*

Contracting is a production-oriented task that only occurred at the office. Therefore, I differentiated managers' respective tasks (e.g., "prepare contracts" versus "gossiping with peers") as two separated practices governed by different logics in managers' day-to-day work. Again, the above-mentioned site manager openly ascribed to these separated practices, using their outputs in the enactment of the other. Here, the manager gains new information concerning a subcontractors' former safety behaviours and imports this output into the contracting to adjust this practice. Despite companies' competitive bidding practices, their members still help each other. Managers exchange experiences when gossiping about former cooperation partners and, thereby, they use their professional relational network to stimulate collaboration in a work setting characterized by competitive and oppositional relations.

4.3.3. Bridging through dynamic decision-making

The next description exemplifies how site management bridges both the logics of production and regulation through dynamic decision-making. In the following situation, the main contractor decides to cancel the contract with one of the subcontractors at the expense of the project's profitability due to heavy safety violations on site:

> *At the shared office hut, Project manager X enters the room and asks their manager colleague to join them for a meeting upstairs. Both managers work together with a subcontractor responsible for installing the project's elevators. At the meeting, the subcontractor's director, the two project managers, the project's director, and the safety manager are present. Quickly it becomes clear, that the contract with the subcontractor is cancelled due to continual safety violations concerning the elevator installations.*
> *Safety manager [addressing the subcontractor's director]: "We have approached and reprimanded your men several times. Within the last three weeks, we experienced safety breaches almost every day. Your men risk falling into the elevator shafts all the way down from the fourth floor. We have also informed you. Still, you are not doing what's agreed upon in your workplace assessment".*
> *The project's director takes over: "We have decided to cancel our contract immediately. Your workers can leave the site".*
> *Afterward, I catch the two project managers who explain how rare such a case is and that it will delay the whole project heavily because everything has to stop now. It will also have serious consequences for the project's profitability. Yet, both managers support the decision: "We have to be consequent. Now, our partners and other companies understand that we do what we say". (Field notes, March 2018)*

In the above-mentioned example, site management resisted focusing their attention and normative basis of individual behaviour on production-oriented values resulting in stopping work, although the project's profitability still was important. Here, the seriousness of the safety violations and the potential of fatal accidents forced the main contractor to cancel the contract. Yet, as the two managers pinpoint, their client and other project participants will be attracted to cooperate on future projects. This contractor is strongly interested in increasing its reputation as a safe and compliant frontrunner, using this to gain new projects and to increase their status in the market. Thus, compliance-seeking strategies prescribed by the regulation logic are used to increase profit and the companies' position in the future. Thus, dynamic decision-making helps site management attain the short-term goal of safety (i.e., stopping work/cancelling the contract) to accomplish the long-term goal of profitability (i.e., attracting new customers). Instead of depicting safety and profitability as an either-or trade-off, site management acknowledged them as contradictory yet both necessary for the organization's long-term success (Smith, 2014).

To sum up, site managers openly ascribe to separated practices, such as enforcing safety rules onsite and contracting at the office as well as using their outputs in the "other" location. Thus, site managers who separate logics also import outputs from one logic into their enactment of the other. They do so by applying the above-mentioned three bridging mechanisms, which are enabled through managers' own judgment of the situation, trusting their own professional expertise and drawing on their nested understandings (Schatzki, 2002). As such, managers bridge multiple logics by drawing on their personal tacit know-how to competently perform specific practices for participation on construction sites by skilfully importing elements of one logic into the enactment of another. Thus, bridging generates complementarities between competing logics as there is no disadvantage for either safety or operational outcomes.

5. Discussion

In this article, I wanted to gain an understanding of how construction site and project managers enact interdependent contradictions in their everyday work in an environment with multiple institutional logics. With this focus on the micro-processes of managerial safety practice, this article aims to contribute to a better understanding of how managers balance safety paradoxes in their everyday work activities informed by multiple institutional logics.

The analysis revealed three institutional logics regarding occupational safety. These logics were identified across the three construction site projects and at different points in time when fieldwork was executed. As such, they are institutionalized and permeate the three construction project organizations. These logics show that construction site and project managers attach different understandings and practices to safety. From the classification of managerial practices, I identified three logics: a logic of professionalism, a logic of production, and a logic of regulation (see Table 1). Managerial practices have been sorted to show which different aspects connect to which logics. First, in the *logic of professionalism*, a primary source of legitimacy is the expertise of professionals (Cornelissen et al., 2020). The strong focus on expertise, education, and informal relations matches the site managers' practices, which are: ad-hoc problem-solving, evaluating on-site work quality, gossiping with peers, coordinating tasks on-site, or discussing technical solutions. Second, regarding *production logic*, priority is given to the project's profitability and managers' attention is focused on productivity (Jia et al., 2019, 2017). As such, safety is considered an extra task to be performed, traded off, or prioritized among the many production tasks on site. The focus on productivity, efficiency, competition, profit, and client satisfaction matches managerial practices, which are: calculating cost-benefits, time planning, invoice management, negotiating prices, and contracting or holding client meetings. Third, for *regulation logic*, priority is given to both legal regulatory frameworks and the company's internal safety rules and procedures and following these rules is the normative basis for managers' individual behaviour (Hasle et al., 2021). The strong focus on safety procedures, documentation, and the enforcement of safety rules matches managerial practices, which are: walking inspection rounds, instructing subordinates, finding information on safety rules, facilitating a workplace assessment, and documenting safety breaches.

The analysis revealed a high level of conflict between these three logics faced by site and project managers in their day-to-day work. In

line with previous studies on institutional complexity (Greenwood et al., 2011; Pache and Santos, 2013, 2010), the institutional demands site and project managers face are clearly codified in regulatory frameworks and safety legislation. Violations of safety compliance are quantitatively measurable (e.g., statistics of incidents and accidents) and centrally prosecuted by national working environment authorities. Additionally, I studied highly skilled professionals who value autonomy in work performance as they use personal judgment and discretion in decision-making. Nevertheless, site and project managers are bound by formal procedures in competing logics concerning, for instance, occupational safety and technical or environmental quality. These conditions promote experiences of conflict and tensions become seemingly unresolvable (Pache and Santos, 2013).

Tensions between logics revolve around the following safety paradoxes: 1) pursuing production goals while also ensuring compliance with occupational safety and health legislation *(production* versus *regulation*), 2) enforcing permanent safety rules top-down while also making situational judgments based on managers' expertise and tacit knowledge (*regulation* versus *professionalism*), and 3) collaborating within competitive relations (*professionalism* versus *production*). I have shown how managers enact these safety paradoxes by over-privileging one logic while neglecting the other, exposing existing "either-or" understandings of safety (Hu et al., 2020) with potentially negative implications for managers' and their subordinates' occupational safety and health. For example, managers considered safety as an extra task to be performed and traded off in favour of the many production tasks on site. Within the safety management literature, studies support these findings (Cornelissen et al., 2020; Hasle et al., 2021; Hollnagel, 2017; Jia et al., 2019, 2017).

Although the analysis revealed a considerable level of conflict between logics and site and project managers' struggle to balance these multiple logics some managers were able to accomplish seemingly competing goals simultaneously. To elaborate our understanding of how managers balance safety paradoxes, I focused my analysis on managerial safety practices that bridge competing logics. The study brings forward two considerations regarding how site and project managers balance these three institutional logics in their everyday work and how they move beyond either-or understandings of safety. First, conceptualizing the paradoxical nature of occupational safety reveals logics' relationships as potentially "mutually facilitative" (Kraatz and Block, 2008, p. 251), because understandings gained from enacting one logic can be imported into the enactment of another. Thereby, the concept of paradox (Schad et al., 2016) is relevant to illuminate the relationships between the three logics because a paradoxical both-and understanding addresses the ongoing tension between interdependent contradictions and resonates well with bridging as it maintains coexisting logics as discrete so that they can nurture each other. Bridging, thus, provokes interdependencies between competing logics that are mutually enriching as the practices prescribed by either logic inform and nurture each other (Jay, 2013). For instance, managers on construction sites might find a solution simultaneously meeting the demands for safety and efficiency, such as streamlining work processes for tidying up the worksite, which creates synergies.

Second, my inquiry focused on exploring one balancing mechanism in more detail, namely bridging, instead of taking other balancing mechanisms and their relations into account (Smets et al., 2015). A detailed focus may reveal those instances and managerial safety practices that trigger bridging. In this case study, managers balanced contradictory logics in practice by importing outputs from one logic into the enactment of the other logic. For example, bridging professionalism, production, and regulation logics seems to be natural for some site and project managers as they draw on their professional expertise, relational network, and tacit knowledge when making situational judgments to align both production and regulation goals (Schatzki, 2006, 2002). These findings expand traditional approaches to safety management that view occupational safety in direct competition with other organizational goals, such as efficiency or productivity (Rasmussen, 1997; Zohar, 2002, 1980). This discretionary use of logics and effortless assembling by site and project managers shows that some of them have the "situational sensitivity" (Smets et al., 2015, p. 960) to know how, where, and when to enact multiple logics. Managers were able to combine logics temporarily to create and benefit from their complementarities when it seemed appropriate. For instance, managers drew on their relational network, using informal information to evaluate potential contracting partners, enhancing both professional membership and project performance. Managers dynamically modify the balance of logics according to the given situation and their situational judgment. It seems that these managers have different practices and related logics at their disposal as tools. The way managers bridge logics resembles the notion of "fluid negotiation" described by McPherson and Saunder (McPherson and Sauder, 2013). Here, the authors show how professionals in a drug court employ multiple available logics on the ground by "drawing on a shared toolkit of logics" (McPherson and Sauder, 2013). This also resembles the notion of "logic fluidity" (ten Dam and Waardenburg, 2020), where healthcare professionals move fluently between multiple logics by assembling different narratives. Hence, these managers employ available logics purposefully to achieve individual and organizational goals using their discretion to choose which logics to employ and the purposes for which they employ them. However, safety may then be left to the discretion of the manager who is assumed to have the knowledge and ability to make skilled independent judgments of situations (Cornelissen et al., 2020).

These findings are in line with previous studies on institutional complexity that have shown how actors on the ground deal with such multiple logics by switching between them (e.g., Gautier et al., 2018), bridging logics (e.g. Smets et al., 2015), blending logics (Svenningsen-Berthêlem et al., 2018), or co-opting them (Andersson and Liff, 2018). However, this study develops current knowledge on institutional complexity by identifying and describing managers' detailed bridging practices to attain organizational goals of production, safety, and professional quality simultaneously. Managers deploy three bridging mechanisms: 1) silent acknowledgment, 2) drawing on their collaborative relational network, and 3) dynamic decision-making. Thereby, these findings show that contradictory logics can be complementary and even enrich each other (see Fig. 2). Besides bridging, managers also separated practices as those practices enacting one or another logic were assigned to specific locations, which resonates with what Smets et al. (2015) called "segmenting". I limited my focus to bridging which may carry the risk of downplaying the tensions among the three identified logics. However, this is a case of complexity with strong articulated conflicts between logics due to the codification of institutional demands.

Additionally, I observed certain situational and individual conditions that triggered managers' ability to bridge contradictory logics. Thus, these conditions may explain why some managers adhere to one dominant logic whereas others use them in a discretionary way as tools. For instance, after an accident had occurred on-site, managers resisted focusing their attention and normative basis of individual behaviour on production-oriented values, although the project's profitability still was important. This change of attention toward safety may be time-limited until a potential new accident occurs. Thus, accidents may be seen as temporal disruptions that trigger dynamic decision-making. Additionally, bridging appeared to be successful when project managers supported and depicted safety and profitability as important and necessary to achieve good long-term performance for the organization. These findings are in line with Hu et al.'s (2018) study on leader support that could motivate both safety compliance and employees to speak up if work was problematic. Very experienced managers with organizational tenure and substantial knowledge about the construction industry had developed relational and diplomatic qualities that supported the development of a collaborative relational network and applied a "friendly" relation-based strategy to achieve goals simultaneously by encouraging compromise. Here, previous studies using the notion of

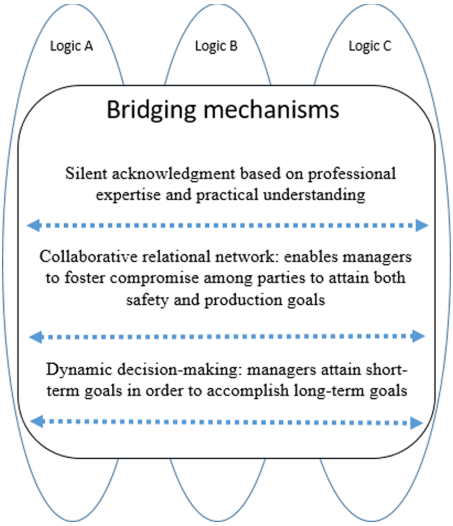

Fig. 2. Bridging mechanisms.

"paradoxical leadership" contribute to developing knowledge about how managers embrace safety and other organizational goals by improving relevant competencies and skills (Grote, 2020; Smith and Lewis, 2012; Waldman and Bowen, 2016).

This study has some limitations as findings are based on a case study of three large construction projects that were all situated in Denmark. More research is required to assess the generalizability of the presented conclusions to different cultures and empirical contexts. While three safety paradoxes have been highlighted, there are certainly other paradoxes that are, or will be, relevant to managers in other empirical contexts. Performing ethnographic studies always carries the methodological issue of affecting the subject under study. In this case, site and project managers might have been affected by the researchers' presence. They might have displayed a more positive version of themselves, for example, they would be more aware of safety breaches on-site and would seek to display themselves as more responsible than they would be in ordinary practice. Due to the global COVID-19 pandemic, it was not possible to validate observational and interview data as intended through participatory workshops, in which the researcher would present preliminary results and receive immediate feedback from managers to verify interpretations in all three empirical settings. The researcher only presented observations and got managers' feedback at the first construction project.

6. Conclusion

In this article, I posed the question "how do construction site managers beneficially combine competing institutional logics?" By gaining insight into managers' day-to-day work activities, this article aimed to contribute to a better understanding of how site and project managers on construction sites balance safety paradoxes through the discretionary use of three institutional logics that relate to managerial practices: a logic of professionalism, a logic of production, and a logic of regulation. Managers bridge these logics by importing outputs from one logic into the other by drawing on their "general" and "practical understanding" (Schatzki, 2006, 2002). Furthermore, they bridge these logics dynamically and situationally by using them as tools to pursue individual and organizational goals. In this case, managers' personal tacit know-how that enables them to perform specific actions competently which they consider applicable to a particular situation means they can effortlessly bridge the available logics. What follows from these observations is that safety research can benefit from adopting more dynamic and actor-cantered approaches to safety management. These insights contribute theoretically to the field of occupational safety as this study shows how actors on the ground transcend "either-or" understandings of occupational safety (Hu et al., 2020), and discerns the mechanisms that trigger bridging. Additionally, drawing on the concept of paradox (Schad et al., 2016) is theoretically relevant to grow our understanding of the relationships between multiple institutional logics.

7. Implications for research and practice

The findings suggest several angles for further research. First, it is argued that relational skills and practical understandings (Schatzki, 2006) play a crucial role in the discretionary use of multiple institutional logics in the daily work of site and project managers. Further research should address questions on how managers can develop relevant competencies and skills to further collaboration within oppositional and competitive relations among construction professionals. Within the safety management literature, such competencies might expand managers' innovation abilities for solutions to occupational safety challenges (e.g., Salguero-Caparrós et al., 2020). This is in line with Schad et al. who formed the "concept of balance" (Schad et al., 2016) in response to paradoxes, in which balancing opposing poles is depicted as an ongoing dynamic concern that creates stability through consistent ongoing micro-shifts. Hence, site and project managers' paradoxical mindset should be fostered to give them the tools to balance safety paradoxes dynamically and, as such, managers' paradoxical practices may reproduce paradoxical understandings that permeate their organizations. Furthermore, I argue that future research may benefit from determining how common facilitative relations between contradictory demands are (integrating safety and operational practice) and what can be done to move construction managers and their organizations away from assuming that working safely means being unproductive.

On a more practical note, this study shows the institutional, organizational, and individual conditions that trigger managers' experiences of conflict and their bridging abilities. Support from superiors and peers as well as professional experience and diplomatic qualities seem paramount to integrate safety and other organizational goals in daily activities. Practitioners may provide managers with direction to balance competing demands. Perhaps, knowledge on the appropriate traits among managers and managerial practices should be considered when designing and planning construction projects. Szentes (2018) pinpointed the importance of the combination of staffing for project teams, for example, using existing relationships in staffing processes. For instance, human resource management could develop hiring policies that may stimulate managers' career development by selecting and developing site managers' capabilities to apprehend and navigate multiple logics. Managers also struggle with how to achieve organizational tasks that span competing institutional logics. For instance, construction site managers "looked the other way" when safety was at risk in order to achieve production goals (Jeschke et al., 2021a). Scholars have suggested that managers can develop areas of interaction to maintain a productive tension between competing logics, thereby facilitating their coexistence (Battilana et al. 2015). Here this study may help to develop site and project managers by encouraging them to respond in certain ways at the encounter of multiple logics, and it sheds light on how managers may enhance organizational performance and solve safety management in innovative ways. Furthermore, an active and engaged client that values safety may affect construction companies' competitive bidding practices. This client will be able to support contractors to bridge both organizational short- and long-term goals by allocating

sufficient resources to safety. Finally, this research points to the advantage of further studies investigating how occupational safety and other operational goals could be beneficially combined as we see in the endeavours to integrate safety (and health) and production in joint management systems such as ISO45001.

CRediT authorship contribution statement

Katharina N. Jeschke: Conceptualization, Writing – original draft, Writing – review & editing, Investigation, Formal analysis, Methodology.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Paper 2: Developing hybrid managerial practices: Managers' professional identities and their impact on safety practices in the construction industry*

Katharina N. Jeschke[1,2], Susanne Boch Waldorff[2], Morten Thanning Vendelø[2], Jeppe Z.N. Ajslev[1]

[1] National Research Centre for the Working Environment, Copenhagen, Denmark

[2] Department of Organization, Copenhagen Business School, Copenhagen, Denmark

Abstract

Due to increased organizational and societal emphasis on occupational safety, it is widely assumed that safety management is part of construction managers' expertise and professional identity because they are hybrid professionals. This paper examines how managers' perceptions of their own hybrid professional identities have immediate implications for the development, organization, and practice of safety management. We collected qualitative interview data from construction managers working on three Danish construction projects in order to analyse how managers' professional identities revolve around four typified positions that are associated with characteristics of an ideal manager – the trouble-shooter, *not* being a police officer, the quality-seeking professional, and the self-sufficient craftsman. Our findings indicate that managers have not yet become hybrid professionals in relation to safety, but instead develop hybrid practices that have various implications for managers' and co-workers' safety practices, beliefs, and behaviours. We contribute to a situated and dynamic understanding of professional identity and its role for developing hybrid managerial practices in relation to safety management.

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Developing hybrid managerial practices: Managers' professional identities and their impact on safety practices in the construction industry

Introduction

Past research on professionalism and professional practice suggests that understanding 'hybridity' is key to understanding how 'professionals with administrative assignments' respond to the persistent dilemma of whether to serve 'professional' interests by facilitating quality and their subordinates' autonomy or 'managerial' interests by emphasizing their teams' organizational productivity and economic efficiency [1–9]. In the construction industry context, a 'hybrid professional' describes construction workers and engineers working in managerial positions, because they balance professional and managerial values and practices and effectively have a foot in both camps [10–12]. The aforementioned dilemma is even more intensified in relation to occupational safety[1] management [13]. For example, construction managers sometimes balance their subordinates' safety and economic benefits of proceeding with unsafe work. Today, employers are legally bound to secure their employees a healthy and safe working environment. This means that construction managers must respond to both the above dilemma and organizational safety liabilities daily [14, 15].

Research suggests that many hybrid professionals are open to adopting some managerial duties and objectives alongside their professional ones [6, 16–18]. Earlier studies have assumed that this can happen when hybrid professionals undergo identity transitions to overcome conflicts associated with serving competing rationales [19–22]. Indeed, there is a substantial literature which points at identity's importance for managerial practice and occupational safety in construction management [1, 23–31]. Several studies have shown how managers' communication and behaviour affects workers' perceptions of safety procedures [13, 32–34]. Thus, developing an understanding of managers' self-conceived professional identities may yield insights into their safety management performance. Such insights might improve the development, organization, and practice of safety management at construction sites by getting managers to recognize their safety

[1] In this study, I focus on occupational safety at construction sites (excluding property and environmental safety and occupational health) and use the term interchangeably with safety.

management (and the necessity that they provide that management) as part of their expertise and professional identity.

This paper argues that construction managers must align their professional identity with their hybrid practices in order to integrate safety into their daily work activities. It asks why and how construction managers' professional identities revolve around safety, and what implications these qualities of their professional identities might have for their safety practices and management. It aims to enhance existing knowledge about how managerial practices towards safety management develop against the backdrop of hybrid professionalism (and thus hybrid professional identities) in contemporary organizations.

Given the constructivist nature of the development and interpretation of professional identity, we adopt a qualitative case study design in this study and draw on positioning theory [35]. We also draw on the concept of subjectivity – i.e., the ways in which we recognize and appreciate ourselves as having a number of more or less stable characteristics [36]. In short, the empirical analysis of our own original qualitative interview data examines how construction managers construct their professional selves through subject positioning. It also investigates how these hybrid professionals handle safety requirements in their daily work, and thus explores how construction managers' motivations towards safety-related activities have been and are being shaped by their professional identities.

Our analysis suggests that construction managers' professional identities are centred upon four ideal safety-related characteristics: they see themselves as 1) trouble-shooters, 2) *not* safety 'police', 3) quality-seeking professionals, and 4) self-sufficient craftsmen. It also suggests that safety management plays only a peripheral role in managers' professional self-understanding, that it affects their motivation and orientation towards safety management, and that this in turn can affect their working environment. Furthermore, it suggests that safety management is not co-opted into managers' existing professional identities, but that managers instead develop hybrid safety practices. Thus, we demonstrate that new managerial practices *do not* trigger identity development – although managers' safety liabilities are partly enacted in practice, they lose out to other values and identity configurations. This paper contributes to the literature on hybrid professionalism by elaborating the relation between hybrid practices and professional identity and by marrying the

hybrid professional perspective to positioning theory in order to gain a more situated and dynamic understanding of hybrid professionals' identities [37–39].

This paper is structured as follows. First, we review the literature on hybrid professionalism. Then, we describe the analytical framework and methodology. Then, we present the empirical study. Finally, we discuss our findings and their implications.

Hybrid professionalism in construction

The early literature viewed a homogeneity of professional training, knowledge, and values as a distinguishing feature of any profession [40]. However, there have always been divisions within professions according to individuals' organizational roles, status, training, and specialization [41, 42]. Some scholars have stated that such divisions potentially alter the various meanings of professionalism and thereby complicate connectedness between and among professionals [43]. This may be true of the construction industry, which has a fragmented professional landscape due to the differentiation and division of labour within the profession [42, 44]. Construction managers often have different professional backgrounds, trade-specific education, and experience. The literature has called for a 'new professionalism' that transcends existing divisions amongst construction professionals – one based on, for example, sustainability [42]. We suggest that a similar call be made in the name of safety. Some scholars have argued that construction professionals have no shared sense of purpose, no shared identity, and no equivalent of the Hippocratic Oath to unite them [45]. This is significant because the literature on professional-managerial hybridity suggests that medical doctors in managerial roles share some unity across organizational levels because of their perceived shared purpose and identity [6, 7, 46].

Engineers and construction workers employed as construction managers can be described as hybrid professionals, since they balance professional and managerial values and practices [12]. Studies on engineers refer to them as 'quasi-professionals' and argue that they accept managerial direction, have weak ties to professional ethics, and feel 'a sense of connection with management' [10, 47]. They also suggest that management is an accepted part of engineers' career path and is even 'an extension of engineering practice' [11, 12]. Studies of construction managers' professional identities are relatively comprehensive. They suggest that managers' identities are centred around being a 'construction worker' and based on gendered ideas of masculinity,

freedom, and independent work [48–53]. They also suggest that managers see their work life as juggling multiple priorities, activities, and problems, and feel that they are required to predict and prepare future events [54–56]. In short, managers perform demanding, stressful work with long working hours [56–58].

Comparatively few studies have examined construction managers' safety-related identities. Some have examined the implications of these identities for construction workers' safety perceptions and behaviours [28–29]. Others have examined how construction workers' 'habituation of pain' is part of their professional identity [30–31]. Our quest for a new, safety-centred professionalism focuses on construction professionals because previous research suggests that hybridity may not be combative in this profession [10–12, 42, 47].

Subjectivity, Subject Positions, and Discursive Practice

Construction managers' professional identities are situated within the contexts of both their organization and their profession. Our research leverages Foucauldian notions of the self and draws on positioning theory to depict how managers reproduce their subjectivities are through speech acts in which they position themselves or others as having certain characteristics or belonging to certain categories or identities. Here, speech acts are utterances that qualify as being socially significant in a given situation – for example, by providing meaning to an unfolding conversation [59, 60]. In their linguistic negotiation of subject positions, our research participants either conformed to or rejected various identity position(s). This suggests that subject positions are not fixed positions but are instead constantly (re)shaped through discursive practices [61]. Indeed, professional identities change over time, in relation to contexts, and might be contradictory or inconsistent, as we shall see below [35, 36]. In short, this paper applies insights from positioning theory to analyse how the various characteristics of hybrid professionals' identities are discursively negotiated.

Such positioning and negotiation can be 'interactive' in which what one person says positions another, and 'reflexive' in which one positions oneself. Additionally, positioning can be typified when it is associated with well-established clusters of attributes, such as nurse-patient or manager-worker. Such positioning is not always necessarily intentional [35]. However, we all participate in and are subject to our own and other's expectations that we produce a coherent,

consistent identity – i.e., we are all subjected to social norms to some degree. Thus, in describing themselves, our interviewees also describe the characteristics by which they measure themselves and others – whether these characteristics are positive and ideal or not [61, 62]. These characteristics define the professional norms that construction managers must engage if they want to be successful. Our use of positioning theory helps us understand the interplay of an individual's self and identity issues in organizational settings, and helps us analyse how positioning and discursive negotiation shapes professionals' identities and behaviour.

Methods

Research design and data collection

This qualitative case study was informed by other studies which have suggested that case studies can help explore new research domains. Interviewing and ethnographic inspired fieldwork in form of observations served as the principal data collection methods [63–69]. We drew solely on interviews of managers working at three construction projects in the Greater Copenhagen area in Denmark between 2018 and 2020. These interviews were intended to gather interviewees' experiences and gain a sense of how they articulate their actions and orientations towards safety-related work activities, and thereby analyse their self-described professional identity. We conducted semi-structured, hour-long interviews with 12 site managers and nine of their closest project managers. All interviews were conducted by the first author and then recorded, transcribed verbatim, coded, and analysed in NVivo12 software. The interviewees addressed how they perceive day-to-day work situations and the challenges they encounter in their work. They were also asked to describe a regular workday, the best and worst parts of their job, how they succeed at work, and asked to give detailed examples of when and how they integrate safety in their work practices.

Participants

Our interviewees were gathered from two large construction companies and one medium-sized company. They were all male (with one exception). Of the 21 managers, 12 were site managers and nine were project managers. Eight of the 12 site managers were 27 to 40 years of age, with 2 to 10 years of work experience. The other interviewees were in their late 40s and mid-50s, had organizational tenure, and often had worked in the industry for the duration of their career. The

majority of our interviewees' professional backgrounds were based on professional education and training (e.g., they were certified carpenters or electricians). Nine managers had university diplomas from construction engineering programs.

Analysis

Analysis of interview data was primarily inductive, proceeding as follows. First, all interview transcripts were reviewed by the first author for any mentions of managers' work objectives, daily work situations, and work experiences. This material was pulled for further analysis, beginning with open coding and moving towards focused and categorical coding [70, 71]. Code words were given to relevant interview excerpts and all excerpts were brought together under a joint code, including 1) characteristics of the ideal manager, 2) safety management practices, and 3) instances in which interviewees experienced tension. These key categories were used to organize and structure our empirical data. Because our analysis aimed at identifying positioning acts in relation to safety management (such as instructing employees or enforcing safety compliance), we selected the following theoretical concepts to conduct analysis within these codes: subject position, interactive and reflexive positioning, and typification extension.

Below, we present our findings by analysing those safety management-related work practices that revealed deep tensions and limitations in interviewees' on-site safety management, exploring their descriptions of ideal managers, and exploring how these characteristics are central to their professional identities. We thematically categorized our findings into four characteristics or positioning acts (Table 1) and will use these four characteristics to frame our discussion.

Characteristics	**Finding**	**The ideal professional manager is one who**	**Managers' hybrid practices in relation to safety**
The trouble-shooter	1.1.	Takes pride in their ability to solve emerging problems as quickly as they occur, is able to prepare work adequately, handles unanticipated events, and detects unwanted errors.	Enforcing safety rules on site (Reacts to sudden issues focusing on unwanted errors or missing protective equipment.) Values quick problem-solving over foresight.
Not a police officer	2.1.	Is not constantly and angrily chasing employees to comply with safety rules, does not try to control workers	Trade-offs, conflict avoidance, and bending rules (Motivates employees to work in order to achieve production

		or enforce work objectives that are not part of managers' expertise.	goals.) Values production goals over safety compliance.
The quality-seeking professional	3.1.	Takes pride in the trade, delivers high quality work for the end user on time and within a budget.	Switching between unfinished tasks (Works simultaneously on many unfinished tasks.) Values high-quality work over efficiency.
The self-sufficient craftsman	4.1.	Finds solutions independently, self-managed, practically orientated, has work experience and professional artisan skills and enjoys autonomy and responsibility.	Overwork, downgrading safety-related tasks and struggling to prioritize action (Works long hours and undervalues safety.) Values self-management over help to prioritize between competing demands.

Table 1: Construction managers' positioning acts and hybrid practices resulting from their professional identities.

Findings

Both theory and the practical demands of construction managers' safety liabilities led us to predict that managers would position themselves as safety leaders or safety compliant if they saw this as important for their self-narration and/or professional identity [30, 31, 35]. However, when asked to outline their work activities and describe the characteristics of an ideal construction manager, none of our 21 interviewees mentioned the importance of safety management. Indeed, they only mentioned motivating employees to reach safety goals when directly asked how safety is integrated into their day-to-day work activities. Their responses to these direct questions tied the enforcement of safety rules (e.g. reprimanding employees missing helmets or safety glasses) to their safety responsibilities. This suggests both that safety management is not considered to be a central characteristic of the ideal manager and that these managers are aware of their safety liabilities.

1. Enforcing safety rules on site

Our interviewees stated that they mostly integrated safety into their work activities reactively – e.g., by reacting to workers not wearing personal protection equipment (PPE) on site. For example,

one manager described a situation in which they saw an employee working without safety glasses: 'I try you, could say…I feel really good if I can say "you should not cut into something like that, are you insane, without wearing glasses. And I will not leave until you put on glasses." If [the employee] does not have glasses, then he is not allowed to go on…I will take his extension cord or his tools or something else. Then I feel good, because then I kind of did something to prevent something that could have happened' (Site manager # 1). This manager drew on a typified position – the site 'watchdog' – and positioned themselves as willing to confiscate employees' tools in the name of safety. By positioning themselves as rescuing their 'insane' employee from unsafe practice, the manager thereby positioned themselves as reasonable and responsible and underlined their commitment to safety by positioning themselves as persistent and willing to use their authority to enforce safety regulations.

Our interviewees told us that enforcing safety regulations during on-site inspections was an accepted part of their job, and that they practiced it in various ways. One manager said, 'Managers go over and see what they have to see and then they go back again. They do not see what happens on the way over there. Well, "Hey, the painters just forgot" or "the electricians just did"… yes, they see that. But they do not see everything else' (Project manager # 1). Here, the project manager is interactively positioning their fellow managers as having blind spots regarding safety regulations; they only 'see what they have to see' and their selective gaze may only detect technical errors made by electricians or aesthetic flaws in painters' work. In so doing, they positioned their colleagues as having a narrow point of view, not taking safety issues seriously, and expressed the idea that the ideal manager is capable of detecting technical errors.

1.1. The first ideal characteristic: the trouble-shooter

Construction sites are highly dynamic workplaces with changing work processes. This dynamism challenges managers' to anticipate future events, contingencies, and gauge potential risks in the workplace. This leads us to our first ideal characteristic of a construction manager identified by our interviewees: they should be able to solve problems as quickly as they occur and prepare work so as to enhance the general workflow.

Our interviewees were aware that it is impossible to account for all unforeseen circumstances. Thus, their definitions and discussions of the ideal manager emphasized responding

to problems as they arise, drawing on a typified trouble-shooter position. One manager said that their job 'is about finding errors, isn't it? Finding out what is wrong…Once you have solved a problem, no one says "Hey (hands clapping) nice; thank you." We just move on to the next problem. We're moving on all the time: "where is it burning, where is it going wrong," and so on. And that's why we're needed…That is our role; to find errors' (Site manager # 2). Here, the manager positioned themselves reflexively as someone who is capable of detecting technical errors and handling potential production delays by pinpointing fires burning, how they are 'needed', and their 'role'. This positioning is in effect in line with the managers' identity as one who has the professional skill of being a trouble-shooter. This problem-solving capacity is imperative in dynamic on-site work contexts and is thus a key characteristic of an ideal manager.

To sum up, our interviewees rarely mentioned or lauded managerial characteristics related safety management. They mostly integrated the enforcement of safety regulations into their work activities and positioned themselves as protective, persistent, and responsible watchdogs who shoulder responsibility and are willing to use their authority. This leads them to idealize the position of a trouble-shooter who solves problems as quickly as they arise. However, they also suggested that this characteristic makes them blind to some emerging issues on site.

2. Making trade-offs, avoiding conflict, and bending the rules

Each of our interviewees stated that they experienced tension between competing work objectives – e.g., maintaining productivity, performing administrative tasks, and performing safety management – in their daily work. Several interviewees explained that making trade-offs is a natural part of their job. These take the form of choosing not to see things and walking past, not having time to discipline employees, and not reprimanding someone for an safety violation in certain conditions (e.g. not reprimanding someone for not wearing a helmet during hot weather). They stated that they sometimes make these trade-offs in order to be able to ask workers for favours later on and thus meet production or scheduling goals.

Even though our interviewees still saw themselves as being obliged to inspect and stop potentially dangerous work, they actively chose to bend safety rules when the 'risks seemed small', as one manager described: 'of course there are times where you say "okay, this is quickly done,

the risk is so small. It's all just a little too tight in terms of safety." So yes, then you go on. You can easily do that' (Project manager # 2). In voicing this tendency, managers reflexively positioned themselves as being mandated to determine when safety rules are too tight given the competing objectives (and thus capable of bending safety rules in the name of other objectives, One manager also suggested that they sometimes look the other way regarding obvious safety breaches: 'Do site managers generally want safety on site? Or do [we] close [our] eyes and walk by [or] look the other way? Even when speaking with an employee, you may see that they are not wearing a chin strap on their helmet or are not wearing fall protection equipment. Or you might miss a fire extinguisher when working with heat, [etc.]' (Site manager # 3). Here, this manager is both interactively and reflexively positioning themselves as being aware of their safety liabilities but strategically choosing to enact their mandate to enforce safety compliance as one of many competing priorities. Hence, safety management is a question of individual managers' free will.

Our interviewees also recognized the difficult of enforcing safety compliance in practice:

> I think that pointing out when someone is doing something wrong is one of the most difficult things to do. In part because these are such boring confrontations. And you don't know how people will react…You do not know people. For instance, do you go up to a stranger who is smoking on the S-train platform? Do you just walk up to them and tell them, "You shouldn't smoke here," and then walk away. No; you do not want that, you do not want confrontation with strangers. You do not know how they will react. So, that kind of [safety-related] confrontation can be difficult. (Site manager # 4)

By emphasizing unpredictability and the difficulty of enforcing safety rules, this manager is emphasizing how approaching workers – especially unknown workers from sub-contractors – about safety violations can be riddled with confrontation. They thus reflexively position themselves as avoiding conflict in order to avoid tension and possible disagreements. In this way, they are identifying a second characteristic of the ideal manager: namely, their safety management does not entail policing others' actions, but instead involves making trade-offs between competing priorities by bending rules.

2.1. The second ideal characteristic: not *being a police officer*

We can observe the central elements of particular professional identities by analysing the characteristics which professionals identify as being the opposite of what is considered ideal [61, 62]. This was the case with our interviewees' descriptions of ideal safety enforcement; they

contrasted their preferred and ideal enforcement behaviour with that of a police officer. They positioned the latter as 'yelling at everyone' and 'chasing' employees down 'without a reason' – i.e., controlling workers too much and enforcing work objectives that are not part of managers' specific expertise. One manager explained this in the following way:

> You could say [that I am enforcing a safe] working environment…But I don't spend my time running around on site playing police officer. I use my time when something is actually dangerous…if [workers] walk on an access footpath on the way to their hut without wearing their safety glasses, then it isn't me who will stop them. Here, I'd rather be able to ask a favour later on instead of having a reputation as 'the guy yelling at everyone'…my job is about getting people do their work. And sometimes that means they have to redo things. It makes a difference which type you are, right? If you are someone who is always annoyed and always chasing [employees] without a reason, then you will deny me if I come to ask you a small favour, right? (Site manager # 2)

Here, the manager reflexively positioned themselves as willing not to reprimand employees in order to facilitate productivity and build rapport which would help them accomplish other goals later on. Hence, the identity configuration of 'not playing police officer' is linked to the professional skill of knowing how to motivate employees to work.

To sum up, construction managers' configuration of their professional identities depends in part on what they consider to *not* be an ideal or effective means of enforcing safety regulations. In doing so, they emphasized the tensions they feel between competing work objectives and how they overcome these tensions by making trade-offs, avoiding conflict, and bending the rules. By 'not playing police officer', managers could facilitate productivity; this, in turn, legitimized their choice to undervalue the need for their own safety management.

3. Switching between unfinished tasks

All of our interviewees identified tensions between work demands and their own limited resources. They suggested that they often feel that they are mediocre at their job, behind in their work, and are not doing the job properly as a result of these tensions. For instance, several managers disclosed their frustrations when they are required to leave some tasks unfinished in order to meet a deadline. They suggested that they are forced to prioritize tasks in order to 'catch those things that fall most

quickly'. They described this as 'playing criss-cross', or switching between unfinished tasks in order to make some small progress on as many assignments as possible:

> There is this problem of having too many tasks – who takes the lead with these things? When there are so many tasks, we end up running around trying to catch those things that fall most quickly instead of deciding what is it we have to control now [to deliver high-quality work]. Often I say, 'I can't do this anymore' – I can't work on some tasks and not others. [Line management] can replace this task with what I'm working on right now when [they] think it's more important. Then of course, we can play criss-cross. (Site manager # 6)

Here, this manager reflexively positions themselves and their co-workers as not being capable of prioritizing work tasks adequately or not being able to control what they work on. Instead, they are often playing criss-cross.

Several managers shared that they had to compromise on their professional values by delivering lower-quality work, and voiced their frustrations with this situation:

> Well, it's not a secret that [things] feel a little strained right now. Because we have some frustrations concerning staffing…And [have too few employees] to solve all the tasks at hand. And on one hand, [line management] are saying 'Well, so you have to find a balance' – they are encouraging us to use 70 or 80% of our time solving problems, not 100%...But this makes it difficult to solve tasks at all…and that causes lots of frustrations. (Site manager # 4)

Here, this manager positions themselves as someone who values the professional's dedication to delivering high-quality work over the managerial objective of delivering work on time. This results in a division among line and site management, as senior project leaders might value managerial objectives more than professional ones. Ultimately, however, the practical difficulty of prioritizing work tasks is tied to contested identity configurations. This leads to our next characteristic of ideal managers: they often positioned themselves and their co-workers as being committed to delivering high quality work out of pride in their trade.

3.1. The third ideal characteristic: the quality-seeking professional

Our interviewees routinely described ideal managers as those who 'deliver a really good piece of work', whose 'work is done correctly with high quality' with 'need for corrections'. They positioned themselves as possessing several characteristics that demonstrated their fidelity to these ideals, such as masterful time management and planning skills or a high ability to coordinate work

tasks. This was not a personal, but a professional compulsion. One manager reflected: 'And then, you could say…professional pride, right? It has to be quality work. You can't just throw something together, so to speak' (Site manager # 8). Here, the manager positioned themselves as a professional who seeks to deliver high-quality work *because* of their professional status – i.e., they connected a high degree of craftsmanship to their professional identity.

To sum up, construction managers' identity configurations are founded in part on the idea that they should be quality-seeking professionals who value high-quality work out of respect for their trade. This idea is itself characterized by the practical constraints of the workplace, e.g. the way in which they are often forced to compromise quality in order to respond to the managerial demand for efficiency. This breeds tension between their professional and managerial responsibilities, forces them to play criss-cross, and results in frustration.

4. Overwork, downgrading safety-related work tasks, and struggling to prioritize action

Several interviewees reported that they felt overworked as a result of limited project resources and increased demands for efficiency. One senior manager positioned themselves as willing to work Saturdays in order to accomplish performance goals:

> Here, one is asked to be…that's expected from you, that you are very self-sufficient. I have to finish my tasks. Whether I'm going home at 3 o'clock or at 7 o'clock in the evening – that's up to me, as long as I'm finishing the task. But nobody would ask you to finish a job on a Saturday. When I do that, then I do it because I want to. When I know, I really want to finish that, then I come over on a Saturday. But there is never any pressure from someone, no one would say that. (Senior manager # 1)

Other scholars have pointed out how this 'virtue of overwork' is woven into the masculine image of the ideal, self-sufficient manager who both shoulders responsibility and enjoys the challenges of work [53]. However, several of our interviewees – especially younger managers who lack experience – mentioned that they need help in order to navigate competing demands. For instance, one of them was asked to perform a written risk assessment on-site and involve his employees in the process. This is a legal requirement and part of managers' job demands. However, they positioned themselves as being incapable of doing the job because they lacked practical knowledge. They preferred to pass this safety-related assignment on to someone else so they could work on other tasks: '[it] would be nice, if someone could do that, so that everything just is as it should be… someone who knows the rules, so I don't have to use one or two hours to read all sorts

of rules' (Site manager # 9). Here, the manager positioned themselves as needing to juggle important priorities – even at the risk of their professional development and responsibilities – thus, they undervalued their safety-related responsibilities. Here, the manager encountered a tension between a high degree of self-management and the need for help, resulting in a priority for production objectives as the manager rather used time to accomplish production goals instead of learning how to perform a risk assessment.

Some of our interviewees, including many younger managers, shared how they struggled to navigate between competing demands and prioritize tasks: 'Your schedule is so damn tight, and are you going to stop 30 men's work? …When you suddenly stop a whole work crew for one hour, well that's a whole week of production for one worker – easily 37.5 hours between those 30 men. And before you start working again, people chat one another up, right? So stopping work has serious consequences for productivity…am I ready for that responsibility?' (Site manager # 2) Here, the manager reflexively positioned themselves as not being ready to stop the workflow and reduce their team's productivity.

This struggle to balance work demands and the lack of support that managers receive from colleagues, superiors, or past experience may lead them to prioritize efficiency and productivity, as one manager explained:

> We are under a lot of pressure right now. We have some deadlines and it will simply cost us DKK 58,000 a day if we haven't finished. So sometimes I have to think, 'Is it important right now that this man standing here and cutting with a machine and dusting the entire place, if it is only himself?' If three other men worked there, then I would not think it is fair to them…but if it's just him. This man has to be done and I know he will be done just in a few hours, unless I reprimand him for not having a vacuum cleaner to put on his machine. It is damn hard to distinguish those things. For instance, my colleagues often say, 'you can't just stop work – we are super busy'. (Site manager # 11)

This manager positioned themselves as someone who engages in cost-benefit analysis to juggle competing priorities effectively. This leads us to our fourth ideal characteristic.

4.1. The fourth ideal characteristic: the self-sufficient craftsman

Overwork leads managers to downgrade the importance of safety-related work tasks and prioritize productivity and efficiency because their professional identity is tied to an ideal kind of self-sufficiency and self-management. This ideal suggests that they should find solutions independently

and enjoy practical, artisanal work, shouldering responsibility, and being autonomous. This identity arises in part from stereotypical images of masculinity; for instance, managers positioned ideal managers as those who are not afraid to 'get their hands dirty' or solve problems on their own: 'When I come out to be on site…if there is anything that needs to be fixed, then you shouldn't be afraid of trying to fix it yourself…we often just try and see whether we can do anything about it, without getting extra help. You shouldn't be afraid to get your hands dirty. At least in my experience, this attitude is welcomed on-site' (Site manager # 14). Here, the manager positioned themselves as proactive and capable of performing practical work outside of their administrative duties, and insinuated that this attitude was welcomed by other workers. They also positioned themselves and their fellow managers as former construction workers who therefore have the professional training and work experience to solve problems, coordinate production, and motivate workers on the site. Indeed, several managers described the ideal manager as 'proactive', 'out on site', and 'being a worker themselves', and interactively positioned managers without these professional backgrounds and experiences as unable to do the job properly.

Our interviewees suggested that managers who lacked professional experience or vocational training were easy to spot and insinuated that they are not real construction professionals: 'I like managers the most who also are craftsmen themselves. There are many who aren't – you can identify them very quickly' (Site manager # 3). This interactive positioning sometimes marginalizes younger managers who have come to the job site from university. In other words, there is a professional division within managers of various professional backgrounds. However, there seems to be a shared norm of professional pride among craftsmen, and this seems to both connect construction managers across professional divisions and reduce internal conflict relative to other professions [10, 12, 47].

To sum up, managers' ideal of being a self-sufficient craftsman is often challenged by practical constraints, including a lack of knowledge/experience, competing demands, and a lack of resources. In attempting to enact this ideal, managers overworked themselves, downgraded the importance of safety-related work tasks, and ultimately struggled to balance production and safety goals. Here, we can see how productivity is also tied into these contested identity configurations, as our interviewees positioned stopping a project's workflow in opposition to their ideals.

To recap, our findings indicate that construction managers' self-described professional identities revolve around four typified positions or ideal characteristics of site and project management – being trouble-shooters, *not* being police officers, being quality-seeking professionals, and being self-sufficient craftsmen. They attempted to enact these identities through a series of hybrid practices (enforcing safety regulations on-site, making trade-offs, switching between unfinished tasks, and downgrading the importance of safety-related tasks). However, these ideal positionings are often challenged in practice; they often exist in tension with competing work demands, lack of knowledge and limited resources. In short, these findings show that safety compliance and management play only a peripheral role in managers' professional identity configurations in practice.

Discussion

Research on professions and professional practice has highlighted how professionals engage in various types of hybridity in order to fulfil both their managerial and professional duties [72]. The literature has also suggested that understanding managers' professional identity is important for understanding their managerial practices [73]. However, there are few studies of professional identity and managerial practice within construction management, and the literature has not fully explored the implications of existing and new research for safety management amongst hybrid professionals. This paper addresses this gap in the literature by showing how Danish construction managers reproduce their professional identities through speech acts in which they position themselves and others as having certain ideal or non-ideal characteristics. Here, we discuss the key contributions of our research findings to the literature.

Our first key contribution is our finding that construction managers' professional identities are structured around four typified positions, outlined above. This implies that these managers' professional identities only encompass safety management to a limited extent – instead, their ideal image of themselves as professionals is based on masculine configurations of identity. This finding is much in keeping with other studies of construction management [30, 53, 67, 68, 74, 75]. Likewise, our interviewees' focus on their professional pride and self-sufficiency is in line with other findings that construction managers identify collectively with belonging to the trade more than they do with their employer [51]. Furthermore, our interviewees indicated that they were not

comfortable exercising extensive negative control over their employees and preferred to compromise on safety-related responsibilities. This suggests that safety management remains an administrative assignment and is not a central part of these managers' professional identities.

This finding corroborates existing research which suggests that hybrid professionals encounter identity conflicts when they attempt to align competing values and practices that come with the hybrid nature of their position [76, 77]. It is also corroborated by studies which show that managers' identity configurations change depending on the situation and context [39]. We found that the key characteristics of managers' professional identities are negotiated and (re)configured through positioning – that they may position themselves as trouble-shooters and enforce safety regulations in one situation and turn a blind eye in order to adhere to managerial values of efficiency in other situations. Our emphasis on positioning allows us to better understand how identity is constructed in dynamic work contexts and contributes to the literature's wider understanding of the situated development and enactment of hybrid practices.

Our second key contribution is that construction managers are not true hybrid professionals. In contrast to previous research, our findings highlight that construction managers struggle to balance competing objectives and values when working as professionals in managerial positions [10, 11, 47]. Moreover, we found that managers possessing various degrees of expert knowledge and experience positioned themselves and others as craftsmen who struggled to balance the competing values of quality, safety, and efficiency. All of our interviewees adhered to a sense of professional values based on pride in their trade, delivering high-quality work, and enjoying practical work. Although they experienced identity conflicts, these managers maintained their existing professional identities. This finding is in line with other studies that have found that professionals do not necessarily identify as managers even when they hold manager roles [6, 12, 78].

Our third key contribution is that construction managers' safety-related practices do not necessarily influence their professional identity. This implies that new managerial practices do not necessarily trigger changes in managers' professional identity. Managers sometimes enact their safety responsibilities by enforcing safety rules on site, but they sometimes compromise on these responsibilities in order to meet other demands – be these managerial (productivity, efficiency) or professional (ideals of self-sufficient, problem-solving professionals). Previous studies in the

healthcare sector have shown how new task assignments prompted the emergence of new expert knowledge and consequently a new professional identity [37, 38]. However, our findings indicate that performing safety-related work activities did not lead our interviewees to develop a new professional identity centred on safety management. We find this result interesting and argue that the lack of identity development is perhaps best explained by context – the construction industry is characterized by dynamic, uncertain work conditions and limited resources, and this impedes managers' engagement in safety-related work or identity formation [79].

Our final key contribution is that construction managers develop other forms of hybridity – namely, they develop hybrid safety practices. These hybrid practices include enforcing safety rules on site, making trade-offs (to avoid conflict) and bending the rules, switching between unfinished tasks, and downgrading the importance of safety-related work tasks. These hybrid practices lead managers to enforce safety rules and regulations inconsistently and with a pragmatic eye towards meeting various competing objectives. Although predictability and planning are imperative in order to promote, systematically prioritize, and integrate safety in organizational operations and reduce occupational accidents, we found that managers cope with these tensions by selectively engaging in safety management, even though they are aware of their responsibility in this regard. These competing demands, a lack of safety knowledge, and limited resources lead managers to feel overworked, downgrade the importance of safety, and play criss-cross, ultimately resulting in frustration and high turnover rates. We also found that managers solved these tensions differently in different situations and according to their personal preferences, and that younger managers in particular struggled with resolving tensions and/or prioritizing competing demands – some worked longer hours, others quit. This finding has led us to consider managers' capacity to prioritize safety management in their day-to-day activities and consider that these hybrid practices may negatively affect managers' working environment and discourage them from prioritizing safety.

These findings lead us to encourage managers to develop their professional identities in ways which include or foreground safety management. Although this is a nominal responsibility of construction managers, this attitude is lacking in practice. This might be done by developing a form of official academic education, vocational or other training which is based on safety

management, which might help promote new (hybrid) safety professionals, as has been done successfully in the healthcare sector [37, 38, 80].

Conclusion

This paper has unpacked the concept of hybrid professionalism in the construction industry and suggested that the literature ought to pursue more situated and dynamic understandings of professional identity and its importance in developing managerial hybrid safety practices, and that the literature ought to encourage construction managers to include safety management as a key pillar of their professional identity. It showed that, despite their official responsibility to provide safety management and research which indicates that new work assignments can trigger the development of new professional identities, safety management remains an organizational assignment and these managers prefer to develop hybrid safety practices rather than adopt safety management as a part of their own professional identity. To us, this suggests that construction managers are not true hybrid professionals – instead, they engage in situated and dynamic (re)construction of their identities and struggle to combine conflicting identity configurations.

We also identified four ideal characteristics that are central to managers' self-described professional identities. This shows that enactment of safety management is often challenged in practice and managers only have a limited space in which to enact safety values; they cannot prioritize safety in their daily work activities, as current manager roles resolve around *ad hoc* assessments of whether to position oneself as trouble-shooter or as quality-seeking professional, or to avoid conflict. Thus, these managers are preoccupied with shaping hybrid practices that have various implications for other managers' and co-workers' safety practices, beliefs, and behaviours. We suggest that future researchers try to gain an empirical understanding of construction managers' experiences of contradictions and tensions associated with their identity. Managers themselves would benefit from exploring these dilemmas through the theory of multiple institutional logics and the theory of paradox in management science [27, 81, 82].

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Paper 3: Complaining about occupational safety and health: a barrier for collaboration between managers and workers on construction sites*

Katharina N. Jeschke[a,b], Susanne Boch Waldorff[b], Johnny Dyreborg[a], Pete Kines[a], Jeppe Z.N. Ajslev[a]

[a]National Research Centre for the Working Environment, Copenhagen, Denmark

[b]Department of Organization, Copenhagen Business School, Copenhagen, Denmark

Abstract

Collaborative safety practices between construction site managers and workers are considered essential in occupational safety and health (OSH). However, establishing joint OSH engagement between managers and workers is still a challenge. Little is known about how managers and workers' 'complaining' about OSH affects collective OSH action and the quality of manager-worker relations. Drawing on an understanding of complaining as 'boundary work', this study empirically analyses how managers and workers' verbalisations either downplay (collaboration) or build (demarcation) boundaries. Interviews and observations between managers and workers were carried out on a construction project in Denmark to identify why and how complaining is used. A typology consisting of four 'complaining' mechanisms was developed, highlighting their associated relational dynamics: 1) Shifting responsibility for advancing OSH, 2) Defending oneself against strained working conditions, 3) Dealing strategically with criticism, and 4) Blaming other occupational groups. Complaining about OSH as boundary work – both collaboration and demarcation – between managers and workers furthers professional fragmentation and conflicts OSH collaboration, yet it occurs in a 'safe space' for professional disagreement. We suggest that these communicational aspects and associated relational dynamics should be an area of increased focus in order to promote managers and workers' OSH collaboration.

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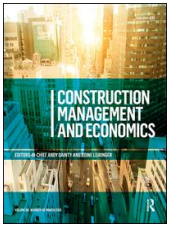

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Complaining about occupational safety and health: a barrier for collaboration between managers and workers on construction sites

Katharina N. Jeschke[a,b], Susanne Boch Waldorff[b], Johnny Dyreborg[a], Pete Kines[a] and Jeppe Z. N. Ajslev[a]

[a]National Research Centre for the Working Environment, Safety Culture and Accident Research, Copenhagen, Denmark; [b]Department of Organization, Copenhagen Business School, Copenhagen, Denmark

ABSTRACT

Collaborative safety practices between construction site managers and workers are considered essential in occupational safety and health (OSH). However, establishing joint OSH engagement between managers and workers is still a challenge. Little is known about how managers and workers' "complaining" about OSH affects collective OSH action and the quality of manager-worker relations. Drawing on an understanding of complaining as "boundary work", this study empirically analyses how managers and workers' verbalisations either downplay (collaboration) or build (demarcation) boundaries. Interviews and observations between managers and workers were carried out on a construction project in Denmark to identify why and how complaining is used. A typology consisting of four "complaining" mechanisms was developed, highlighting their associated relational dynamics: (1) Shifting responsibility for advancing OSH, (2) Defending one-self against strained working conditions, (3) Dealing strategically with criticism, and (4) Blaming other occupational groups. Complaining about OSH as boundary work – both collaboration and demarcation – between managers and workers furthers professional fragmentation and conflicts OSH collaboration, yet it occurs in a "safe space" for professional disagreement. We suggest that these communicational aspects and associated relational dynamics should be an area of increased focus in order to promote managers and workers' OSH collaboration.

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Boundary work; manager-worker relation; negotiation; mechanisms; typology

Introduction

> It's important, if you have a process you want to speed up, and we all need to be so busy, then we need to have something proper to walk on. […] it's grotesque that they [managers] continually put pressure on us, we have to lift and carry (heavy objects) and have all these things with us, and it has to be done in half the time - but they can't provide us with proper stairs to get up into an apartment. They can't give us a proper path to walk on, nor a safe place to walk without risking being run over [by vehicles]. This is really, really bad … and it's not something that promotes morale out here. (Interview, worker)

Complaining, the act of expressing dissatisfaction or frustration about someone or something (Boxer 1993, Kowalski 2002), is a common feature of everyday group and organisational life (Pouthier 2017) and a widespread phenomenon in the building sector (Styhre 2010, 2012). The above-mentioned quote is taken from an interview with a construction worker, who complained about unsafe on-site work conditions, insinuating that site management is not collaborating properly regarding the establishment of occupational safety and health (OSH). This article scrutinises this statement by investigating how issues of OSH collaboration between construction site managers and workers are linked to the practice of complaining. Previous research on complaining stressed the relational and emotional importance of these seemingly mundane and recurrent communicative activities, both for the quality of social relations at work and for the collective identification in teams (Weeks 2004, Styhre 2010, Pouthier 2017). Yet, surprisingly little academic consideration has been given to the practice of complaining on construction sites (Styhre 2010); particularly in understanding how complaining may or may not develop collaborative safety practices between managers and workers. This triggers questions regarding

CONTACT Katharina N. Jeschke kcj@nfa.dk National Research Centre for the Working Environment, Safety Culture and Accident Research, Lersø Parkallé 105, 2100 Copenhagen, Denmark

mechanisms capable of fostering the development of more positive emergent conditions for OSH collaboration. Thus, it is argued that complaining may be an important social activity to build "a shared ground for continual collective action" (Styhre 2010, p. 801), and thereby improve OSH collaboration between managers and workers.

The construction industry is a particular interesting context for examining how construction professionals' complaining practices are linked to OSH collaboration, due to a fragmented professional landscape (Fellows and Liu 2012). Construction projects are replete with various boundaries or distinctions between different participants' knowledge claims, resources and practices, concerning what is and is not safe and how to achieve safety goals. Safety knowledge is understood as something dynamic, diverse and sometimes contested (Pottier *et al.* 2003, Antonsen 2009, Hale and Borys 2013). Previous studies on safety climate and safety leadership pinpoint how managers' communication and behaviour affects workers' safety perception (Zohar and Luria 2003, Zohar 2003, Kines *et al.* 2010) and how safety leadership or managers' ability to gain subordinates' trust and respect (Wu *et al.* 2016) is associated with positive safety practices (Grill *et al.* 2019). Thus, enhancing manager-worker relations is imperative to improve collaborative safety practices. OSH collaboration is both organised by formal structures based on legal frameworks (European Agency for Safety and Health at Work 2018), and practiced informally in everyday work. Although several studies recognise the importance of OSH collaboration, and have provided theoretical insights relevant for understanding manager-worker relations and their significance for OSH practices (Paap 2006, Thiel 2012, Ajslev *et al.* 2013, Andersen *et al.* 2015, Grytnes *et al.* 2020), OSH collaboration between managers and workers is described as conflicted *(Grytnes et al.* 2020). For instance, Grytnes *et al.* (2020) exemplified the difficulties in establishing collaborative safety practices by exploring resistance and distrust among the workforce. In other research, the manager-worker relation is described as an "oppositional relationship" (Andersen *et al.* 2015, p. 646), where construction workers identify themselves in opposition to their managers and employers (Paap 2006, Thiel 2012, Andersen *et al.* 2015). Managers and workers' oppositional relationship makes an analysis of how complaining is used to tackle and negotiate distinctions between these two groups plausible.

There is a lack of insight on why and how such distinctions regarding OSH are negotiated in order to enhance the quality of OSH collaboration. From a boundary work perspective, this article aims to analyse the mechanisms of construction site managers and workers' complaining practices, and their implications for the manager-worker relations and OSH collaboration. Thus, in search for promoting OSH collaboration within construction management, the case of managers and workers' complaining practices may yield new insights precisely because previous research suggests that OSH collaboration is challenged in such professional fragmented and contested work settings (Antonsen 2009; Fellows and Liu 2012; Grytnes *et al.* 2020). A focus on managers and workers' boundary work is both theoretically interesting and practically relevant, as there is a lack of insight into how occupational groups construct their boundaries and distinctions (Battilana 2011, Bucher *et al.* 2016), and thereby purposefully influence such distinctions (Lamont and Molnár 2002, Phillips and Lawrence 2012). A deeper understanding of how complaining as boundary work is played out, may elucidate the establishment of collaborative OSH practices and improve construction projects' coordination work in general.

In order to discuss the premises for OSH collaboration and manager-worker relations, the empirical results from a qualitative case study of a construction site will be involved. Drawing on the concept of boundary work (Langley *et al.* 2019), we conceptualise complaining as "purposeful individual and collective effort to influence the social, symbolic, material and temporal boundaries, demarcations and distinctions affecting groups, occupations and organizations" (2019, pp. 4–5). In short, the empirical analyses focus on the group level, and investigate managers and workers' purposeful efforts to influence their distinctions by using complaining practices. We contribute to the literature on complaining in organisations and boundary work by elaborating a processual constructivist view of boundaries as continually becoming (Langley and Tsoukas 2017), and as subject to human agency which is not always reflected in concepts of boundary spanning or boundary objects (Bresnen 2010, Fellows and Liu 2012).

The study reveals how managers and workers influence their boundaries through four complaining mechanisms concerning OSH: (1) Shifting responsibility, (2) Defending oneself against strained working conditions, (3) Dealing strategically with criticism and (4) Blaming other occupational groups. Both groups use complaining as a mechanism to downplay differences within their respective occupational group, thereby enhancing intra-group collaboration. However,

workers attempted at times to downplay boundaries towards managers, thereby enhancing collaboration across occupational roles. Yet, both groups mostly used complaining to mobilise and sustain differences between managers and workers, and thereby complaining widened inter-hierarchical division. Thus, we demonstrate that complaining is an important social activity on construction sites (Styhre 2010). Yet, instead of improving poor working conditions, it reinforces the "oppositional relationship" between managers and workers in relation to OSH (Andersen *et al.* 2015, p. 646).

This paper is structured as follows. First, we review the (scarce) literature on complaining in organisations before the analytical framework and methodology of the study is accounted for. Second, the empirical study is presented, followed by a discussion of the findings and implications for both site managers and workers' collaborative safety practices and OSH research in the construction industry more broadly.

Theoretical frameworks

Complaining in an organisational context

Within the literature on psychology, complaining at work provides an important coping mechanism through which employees can "mentally disengage and emotionally distance themselves from troubling or threatening situations that come with their job" (Pouthier 2017, p. 755). Here, complaining is known for its tension relief function (e.g. Kowalski 2002). Through complaining or "the exchange of plaintive and commiserative lines, organisational members communicate displeasure or annoyance with a past or ongoing action or situation" (Pouthier 2017, p. 755). Employees use complaints to manage stressful and difficult situations they regularly are confronted with at work (Weeks 2004, Pouthier 2017).

Beyond its psychological tension relief function, the literature on organisational culture suggests that complaining is important in creating and sustaining a sense of community and team engagement (e.g. Weeks 2004, Fine and DeSoucey 2005, Styhre 2010, Pouthier 2017). Styhre (2010) argues that the practice of complaining among construction professionals is "setting up the boundaries for what is a shared ground for further reflection and joint collaborations" (2010, p. 798). Complaining is also a source of humour (see e.g. Hatch and Ehrlich 1993, Rodrigues and Collinson 1995, Baarts 2009, Westwood and Johnston 2013). These previous studies have conceptualised complaining as interaction ritual in a bank (Weeks 2004), identification ritual within teams (Pouthier 2017), and as ideology for a whole industry (Styhre 2010). Common for these approaches is that complaining operates on the level of the subconscious, and is "largely inaccessible for commonsense thinking and self-reflexive endeavours" (Styhre 2010, p. 800).

Another approach is the concept of "boundary work," adding the notion of work as "involving ongoing activities or sets of practices" (Langley *et al.* 2019, p. 5). Thereby, this approach views complaining as subject to human agency by conceptualising boundaries or distinctions regarding OSH as purposeful created, maintained, blurred and transformed by managers and workers (Langley *et al.* 2019).

Conceptualising organisational complaining as boundary work

In this study, we draw on existing literature dealing with the notion of boundary work (Langley *et al.* 2019) to conceptualise complaining and analyse manager-worker relations, and to investigate implications of this boundary work for OSH collaboration. The term boundary work was first coined by Gieryn (1983) to explain the discursive practices of scientists seeking to distinguish themselves from non-scientists. In more recent work, and in line with the "practice turn" in organisation and management theory (Schatzki *et al.* 2001, Nicolini 2012), boundary work is the "purposeful individual and collective effort to influence the social, symbolic, material and temporal boundaries, demarcations and distinctions affecting groups, occupations and organizations" (Langley *et al.* 2019, pp. 4–5). In contested and professionally fragmented work settings such as construction sites, symbolic boundaries refer to "socially constructed interpretative distinctions concerning concepts" (2019, p. 5), such as distinctions between what is and is not safe, resembling with different participants' differing safety understandings. Symbolic distinctions are often attached to social boundaries including certain people (e.g. higher-status professions such as engineers or managers holding higher-status occupational roles) and excluding others (e.g. lower-status professions such as craftsmen or workers holding lower-status occupational roles). Other boundaries are physical referring to the "spatial separation" (Langley *et al.* 2019, p. 5) including the role of materiality (Hernes 2004), for instance the distinction between workers' physical work on the tools outside, and managers' administrative work inside the site office. As such, boundary work views complaining as a purposeful effort to influence such distinctions,

and negotiate OSH collaboration between the occupational group of workers and the occupational group of managers.

The concept of boundary work helps to develop a deeper understanding of how participants from different occupational groups purposefully negotiate distinctions in relation to OSH, in order to downplay or create and maintain differences. Thus, boundary work entails two broad dynamics: *(1) boundary-downplaying or collaboration*, and *(2) boundary-making or demarcation*. Demarcation refers to "how people construct, defend or extend boundaries to distinguish themselves from others" (Langley *et al.* 2019, p. 8). This is documented in studies of how groups do boundary work to define legitimate membership and exclude others, for example employer brand managers' descriptions of their work protecting an ideal employer brand (Santos and Eisenhardt 2005, Mikes 2011, Edlinger 2015, Ashuri and Bar-Ilan 2016). This is also documented in studies of how professions do boundary work to defend, extend or maintain their jurisdiction, for example radiologists versus other medical specialists (Allen 2000, Burri 2008, Hazgui and Gendron 2015). Scholars have also suggested that higher-status professions tend to defend existing boundaries, while lower-status professions strive to change them (Abbott 1988; Battilana 2011). Boundary work as demarcation (boundary-making) corresponds with discussions about the construction industry's professional fragmentation, and the inherent challenge of differences in perspectives, goals and priorities in cross-boundary work settings as to what safety is, or is not, and who has the jurisdiction to act. Applied to the manager-worker relation it is assumed that the group of managers, holding a higher-status occupational role, may tend to defend their jurisdiction.

Some studies consider the term boundary work in a broader sense that addresses its relevance for collaboration (Faraj and Yan 2009, Ybema *et al.* 2012, Quick and Feldman 2014, Meier 2015, Lindberg *et al.* 2017). Collaboration emerges as people work in interdependent, cross-boundary settings where they cannot achieve goals alone. In the construction industry boundary work as collaboration (boundary-downplaying) is reflected in the discussions about OSH collaboration as a negotiation (Grytnes *et al.* 2020), and refers to "how boundaries are negotiated, accommodated, aligned and downplayed in order to get work done" (Langley *et al.* 2019, p. 26). The conceptualisation of complaining as collaboration (boundary-downplaying) corresponds with an understanding of OSH as positioned, and sometimes contested (Pottier *et al.* 2003, Antonsen 2009, Hale and Borys 2013). Applied to the manager-worker relation, it is assumed that the group of workers, holding a lower-status occupational role, may strive to downplay distinctions. Hence, boundary work also contributes to the maintenance or change of power relations among groups (Allen 2000, Bucher *et al.* 2016).

The concept of boundary work is relevant for this study due to its focus on the dynamics of collaboration (boundary-downplaying) and demarcation (boundary-making) that may influence work practices, learning and effectiveness in and around organisations (Zietsma and Lawrence 2010, Yagi and Kleinberg 2011, Mørk *et al.* 2012, Lindberg *et al.* 2017). Thus, understanding the phenomenon of complaining as demarcation and/or collaboration serves to understand its relational dynamics within organisations, and its consequences for the manager-worker relation and OSH collaboration. Our theoretical framework, then, combines the literatures on complaining and boundary work using the notions of collaboration and demarcation to conduct our analysis of the manager-worker relation.

Methods

Research setting and participants

The present study is based on a qualitative single case study design (Stake 1995, 2005), which is particularly suitable to investigate why and how complaining as boundary work influences the quality of OSH collaboration and social relations at the workplace. The case is a construction project in the greater Copenhagen area in Denmark, based on a turnkey contract employing four site-managers and one part-time safety manager (all managers were male, Danes and working for the main contractor), and approx. 50 workers (all male; a combination of Danish and migrant workers) from 13 different sub-contractors. The 13 sub-contractors delivered services within carpentry, joinery, masonry, plumbing and sewer work, electrical, insulation, painting, roofing, earth and concrete, scaffolding, flooring and installing special designed wooden walls. Workers worked in small crews consisting of three to eight people. Both the crew foremen and crew leaders (both considered as "workers" in this paper) were mainly observed working alongside with their worker colleagues. As the construction project at times demanded additional staff, sub-contractors hired temporary workers for special job tasks, of which many workers were migrant workers. A high turnover rate affected the construction project's formal safety organisation (i.e. a joint safety committee

with representation of managers and workers). Based on an explicit legal OSH framework (European Agency for Safety and Health at Work 2018), construction work is organised through formal structures that foster OSH collaboration, for instance an internal safety organisation like the joint safety committee. The establishment of a safety organisation within all companies with more than 9 employees is therefore legally bound (Dyreborg 2011). Management communicated with workers from sub-contractors via several weekly on-site meetings, including production meetings, foremen meetings and safety (OSH) meetings. At these meetings, managers and workers could communicate and coordinate the building process. Very rarely, however, had the work crews chosen safety representatives, who were to participate regularly in safety meetings, which thus diminished workers' influence to improve OSH.

Data collection

The empirical data draw on ethnographic methods (Pink *et al.* 2012) which were applied differently by previous ethnographic studies (Thiel 2007, Baarts 2009, Löwstedt 2015, Jia *et al.* 2017, Grytnes *et al.* 2020). For this particular case, these studies inspired our fieldwork collecting observational data, interviews with construction managers and workers and archival data (reports from safety meeting and on-site inspection rounds) over three months in 2018 illuminating daily practices and situated interactions. In particular, Gherardi and Nicolini (2002) provided strong support for studying daily practices and social interactions at construction sites. Therefore, several site visits were carried out to enable 50 hours of observation of situated social interactions and (everyday) communication between managers and workers. During these visits, data were collected by the first author, in the form of observations *in situ* (on site) of how the managers and workers interacted with each other, in both formal and informal conversations. The multiple site visits varied from three hours per day, to at times two full workdays (8 hours each) in a row for three months, thus generating extensive field notes. The first author took part in formal safety and production meetings as well as site walkarounds with the on-site safety manager, and was able to walk around the site freely, talking to and observing what was going on amongst the managers and workers. An open research approach was adopted, where the researcher openly clarified OSH was the topic of investigation. Compared to previous ethnographic studies (Thiel 2007, Baarts 2009, Löwstedt 2015, Grytnes *et al.* 2020) the researcher's role in this case was that of a visitor and observer, and only in very few instances did it involve engagement in the daily work. The researcher regularly talked informally with site managers in the office, at lunch, during on-site walkarounds and in meetings. This alternating between managers and workers was important to study empirical examples of complaining instances, and how complaining fostered and inhibited safety.

After the observations, semi-structured interviews with the site managers and workers were conducted, which provided an opportunity for the researcher to refer to actual daily practices, receive immediate feedback on observations, and to verify interpretations. Six semi-structured interviews were conducted with the entire line management, including one foreman, three site managers, one project manager and one safety site manager. All interviews were conducted on-site by the first author and lasted 40–95 min. The interview guide dealt with open-ended questions about daily work tasks, and participants were asked to exemplify situations where they collaborated and experienced contradictions. Interviews were used to explore the perception and management of differences and conflict in the management team. Additionally, one focus group interview was conducted with five members of two crews working as carpenters and joiners. Interviews were recorded and transcribed verbatim.

Data analysis

Data were analysed using a preliminary conceptual framework, and from there on, iteratively developing the analytical categories. Complaining was not initially part of the research focus; its significance emerged through observations as to what was special and surprising during fieldwork. A sense of opposition between managers and workers made the observations and analysis on the group level of situated social interactions between the groups plausible. We began the investigation aiming to understand how managers and workers tackle their differences and looked for evidence of boundary work (Langley *et al.* 2019) in social interactions. As the study proceeded, new issues arose, and we pursued new possibilities as we followed up on situations the first author had observed. Among the practices identified in interactions, complaining stood out by its frequency of occurrence, and workers addressed their complaining mostly towards the group of managers and vice versa. Therefore, we focussed our attention to the discursive and subtle practices of complaining between managers and workers (including workers

from the different sub-contractors and one work crew employed by the main contractor). Field notes from observations and transcriptions from recorded interviews were analysed to produce knowledge about the situations in which complaining about OSH developed, the different purposes of complaining (complaining mechanisms), and their impact on fostering or hampering collaborative safety practices (collaboration or demarcation). The transcribed interviews and field notes were read through closely, and the data material were coded in NVivo12 according to this theme.

As the first analytical step, we marked all incidents of complaining identified in the mass of data, with complaining incidents being distinguishable by expressions of dissatisfaction and a tone of plaintiveness and frustration (Pouthier 2017). As a second analytical step, we read through all the resulting 412 complaining incidents, identifying recurrent topics and selecting only complaining incidents concerning OSH-related issues. In the third analytical step, we analysed the different purposes of managers and workers' complaining when addressing OSH issues. Styhre (2010), who suggests three complaining functions ("building a community", "to shrug off criticism" and "to cope with uncertainty" (2010, p. 800), inspired our analyses as we looked for complaining mechanisms in our data. As we draw on the concept of boundary work (Langley *et al.* 2019), our final analytical step was aimed at identifying how these complaining mechanisms were purposeful efforts to downplay or create boundaries between managers and workers. Thus, the following theoretical concepts were selected to conduct the analysis: demarcation (boundary-making) and collaboration (boundary-downplaying). We analysed complaining as boundary work that effected the manager-worker relation in two ways: First, as verbalizations of differences that may maintain or create boundaries (demarcation). Secondly, complaining as boundary work effects the manager-worker relation through verbalisations of similarities that may unify participants, and thus downplay distinctions (collaboration). These analytical tools were used to understand complaining mechanisms' relational dynamics better and their consequences for the manager-worker relation and OSH collaboration.

Results

In this section, we initially present the various boundaries existing between managers and workers. We then present complaining in relation to OSH as serving four mechanisms, both supporting intra-group relations and constraining inter-group relations between managers and workers. We have categorised the identified four complaining mechanisms into two dynamics of complaining: collaboration or boundary-downplaying and demarcation or boundary-making. Each mechanism and their relational dynamics are exemplified by observational field notes and interview quotes.

Boundaries between managers and workers

Both on-site construction managers and workers faced many challenges due to strenuous working conditions and professional fragmentations. OSH legislation (European Agency for Safety and Health at Work 2018, Arbejdstilsynet/Danish Working Environment Authority 2020) presupposes that managers and workers work together in order to coordinate the total process of the different construction project stages, yet site management dedicated minimal time to cross-boundary OSH coordination and problem solving. The challenge of differences in knowledge, practices, priorities and economic interests was always present in this cross-boundary and contested work setting, with managers and workers encouraged to professionally and/or organisationally construct safety in diverse, and potentially conflicting ways and to prioritise different goals. This contested work setting fostered various boundaries or demarcations between managers and workers, which were of physical, symbolic and social nature. Our analyses showed that complaining in relation to OSH incidents most often addressed "the other occupational group", referring to distinctions between managers and workers' domains of knowledge, their hierarchical status and their work performance. Managers characterised workers in general as "lazy", and depersonalised them as "arms and legs", who could not "be trusted", and distanced themselves from OSH-related work as not being a management task. Whereas workers told us, those managers were "incompetent", "lack knowledge to handle a construction project", as they were "hiding behind their desks", instead of being outside, and distancing themselves from OSH-related work as being a management task. This cultivated a tighter affinity within the participants' respective group than between these two groups.

A typology – four complaining mechanisms about OSH

The observed complaining incidents were centred on recurring themes, occurring in situations where the following issues became the topic of conversation: (a)

Table 1. Typology of complaining and associated relational dynamics.

	Associated relational dynamics of complaining	
	Collaboration	Demarcation
Complaining mechanisms	*Boundary-downplaying*	*Boundary-making*
Shifting responsibility for advancing OSH		Others are supposed to act; Fosters inertia
Defending oneself against strained working conditions	Bonding with own occupational group addressing shared concerns	Disengaging & distancing oneself from threatening situations by expressing anxiety and stress
Dealing strategically with criticism	Identification with own occupational group	Safeguarding one's own professional standards; Brushing off allegations
Blaming other occupational groups	Identification with own occupational group	Safeguarding jurisdiction against other occupational groups & own professional standards

specific OSH risks e.g. lack of clear access paths, (b) challenging working conditions e.g. tight schedules and uncertain work tasks, (c) strained working relations, (d) low control over work demands, and (e) the other occupational group (managers versus workers). In the following we propose a typology of four mechanisms (see Table 1) that complaining may have, providing details on the recurring topics that both managers and workers drew upon, and analysing how collaboration and demarcation is accomplished through these complaining mechanisms.

Shifting responsibility for advancing OSH

Complaining serves as a mechanism that may be used to shift responsibility for advancing OSH onto the other group (i.e. workers pointed at managers and vice versa). Workers repeatedly complained in an intense tone about dangerous and challenging working conditions, e.g. in situations where too many different work crews shared the same work area, scaffolding was blocking building entries or exits, or where on-site access roads were lacking. The most intense complaining incidents targeted site management, with whom workers were frequently disagreeing as to the best course of action for OSH, as exemplified in the following quote:

> It is totally grotesque that they have been allowed to do so [not provide safe access paths]. Their stairs for accessing the apartment are simply too high. They'll say 'Well, you'll just have to lift your legs five centimetres higher, right?' But if you walk on large plasterboards in and out of apartments, then you'll have pain in your hips when you get home, because you have to take that extra high stair. And the [makeshift] stairs are also loose, they are just laid there, so that they sometimes slide to the one side or the other when you walk on them …, and scaffolding is set up blocking the entrance. (Interview, worker)

This complaining incident addressed specific OSH issues like inaccessible workspaces and slippery stairs, and may initially be perceived as an instance of "tension relief" (Kowalski 2002) or "handling difficult situations" (Pouthier 2017). However, at the same time, it is an example of boundary work (Langley *et al.* 2019), as the worker, through his expression of frustration, demarcated himself against site-management by pointing out managers' responsibility for the non-ergonomic workspace layout, as "their stairs" are too high. Complaining may therefore serve as a mechanism to shift responsibility for OSH-promoting activities onto the group of managers. Through complaining, the worker distances himself from managers' expertise, as managers' decisions to use certain stairs are described as "grotesque", indicating that managers lack an understanding of workers' challenges in entering buildings, and therefore do not act responsibly, even though OSH-promoting activities fall under managements jurisdiction. Complaining thus reveals a physical and social demarcation between managers and workers. Workers doing heavy work outside are the ones who potentially suffer physically from risky working conditions, and they lack the capacity to change the workspace layout, as their hierarchical position and their power demarcate them from that of managers.

On the other hand, managers regularly complained in a mild tone about strained working conditions, as they told us that their own "work is constantly interrupted", and that they had to manage complex and uncertain working conditions due to ongoing changes in organising the work at the site. On the one hand, they had to work within a tight budget, and on the other hand they had open business contracts with sub-contractors that pressured them to "hire whom they could get", while unpaid bills from sub-contractors piled up on their desks. Managers blamed the tight time schedule and high turnover among the workforce, forcing them to compromise their

professionalism, as the following conversation between managers illustrates:

> Manager 1: We have such a high turnover among people out here, we don't have a culture… [is interrupted]
>
> Manager 2 [interrupting]: There is no shared sense of responsibility. We probably won't be able to develop a culture. But we should probably be able to have that sense of responsibility, right?
>
> Manager 3 [in an accusatory tone]: We haven't held the start-up meetings we need. That is, [colleague's name] did it a lot in the beginning. Every time new people came, they had to pass by [colleague's name] and go through the site-introduction process, or at least an excerpt of it.
>
> Manager 1 [shaking his head]: But we can't achieve this at all now.
>
> Manager 3 [looking at the table]: And that's also a big mistake. (Field notes, managers)

In this complaining situation, managers at first glance expressed their frustration over the lack of a "shared sense of responsibility" among the workers – a "complaining over difficult situations" (Pouthier 2017). Managers in general described not having the capacity to bond with ever-changing work crews in order to develop a shared sense of "we"-ness, and a shared understanding of being mutually responsible for the construction project's success. Manager 3 reminded his colleagues of their responsibility towards the workforce, and that they did not live up to it, which manager 1 disclaimed, blaming the tight time schedule. Here, complaining enables boundary-making, and with that the shifting of responsibility onto working conditions and circumstances such as the tight time schedule and workers' lack of shared responsibility.

Complaining exchanges referred recurrently to the tense manager-worker relations, as workers often complained in an intense tone about breakdowns in communication, whereas managers addressed workers' carelessness at work. Both groups indicated a lack of trust towards each other, and a lack of confidence in the other groups' expertise and willingness to support OSH. Workers jointly complained about managers' miscommunicating and a lack of information needed for their work progression, as the following quote illustrates:

> Worker 1 [shaking his head]: I think it's frustrating […] to have to raise a question over there [pointing his head at the site-management's office hut] and get answers. I don't think you can always get that. Otherwise, they just tell you that you've already been told, even though you may not have been told.
>
> Worker 2: Or else, you'll receive [the information in] an email.
>
> Worker 1: To be completely honest, I think it has a lot to do about disclaiming responsibility. (Field notes, workers)

Venting frustration, and seeking to develop solidarity among co-workers (Katriel 1985), workers pointed out that receiving an email did not satisfy their need for information, as it meant that management was neither present nor accessible. Here, complaining enabled demarcation or boundary-making between managers and workers by drawing on differences in professional practice, for instance in using verbal and written communication to exchange information. Whereas managers wrote emails to negotiate demands towards other project participants, workers did not.

The three complaining examples above exemplify complaining as a mechanism enabling the shifting and avoidance of responsibility for advancing OSH activities. Here, complaining serves to construct distinctions between managers and workers and as such nurtures demarcation, whereby the others are supposed to act, but nobody feels obliged to do so, thus fostering inertia.

Defending oneself against strained working conditions

We also identified complaining as a mechanism that may be used to distance oneself from troubling situations by expressing anxiety and stress. Managers and workers described being exposed to both physically straining and psychologically stressful working conditions, stemming from heavy workloads and organisational demands to meet a tight time schedule. Both managers and workers told us that they worked long hours to catch up with the schedule, "one has to work overtime," "the time schedule cannot be met," and that work was "interrupted." This affected workers' daily work performance directly as "work pace is sped up," affecting them mentally "when one should block out (all other demands) and focus on oneself." Workers commented together on how pressured they felt due to uncertainty, and low control to decide how to accomplish tasks and to prioritise work, as can be seen in the following conversation between crew members from two sub-contractors:

> Carpenter [grimacing]: Three days ago, I was a day ahead of schedule. Now [according to this new schedule] I'm four days behind.
>
> Joiner [in an angry tone]: We are three months behind. From the one day to the next, we are suddenly three months behind schedule. This is what

> they [referring to site-management's schedule] came up with yesterday.
>
> Carpenter: It's about you working your arse off until finally you can say, now, now we've caught up. And then … [not finishing sentence].
>
> Joiner [frustrating voice]: And then they come up with something new. (Field notes, workers)

In this complaining situation, workers jointly expressed their frustration over the uncertain work situations strengthening the bonds within the group of workers, as they jointly faced the same situation. This is an example of complaining used as collaboration or boundary-downplaying, as workers from different subcontractors shared concerns, which may have fostered a shared understanding within the social boundary of being a worker (Styhre 2010, Langley *et al.* 2019). Workers not only expressed their frustration, but also developed a sense of "we"-ness. The simultaneous display of irritation and weariness linked the workers together in a companionship of exposure to similar work stressors (Pouthier 2017). In this complaining situation, workers addressed as well site-management as "they come up with something new", demarcating themselves from managers, using verbal cues like "we" (us) and "they" (them). Workers ascribe their experienced uncertain work conditions to managers' handling the time schedule and project coordination, insinuating that managers' jurisdiction to control work processes actually is hampering workers' capacity to influence such uncertainty. "Being behind schedule" is synonymous with doing a poor job, and not being professional. Workers "work their arse off" to stay on time, but cannot win the battle. Here, complaining not only serves for boundary-downplaying or collaboration within the group of workers, but also to demarcate oneself from managers, in order to cope with uncertainty, as workers do not know whether and how they ever will be "on time".

Managers and workers experienced uncertain and ever-changing work tasks on a daily basis, and described this as unpleasant. They met regularly in weekly coordination meetings to organise the upcoming work and to reduce uncertainty. However, workers described these coordination meetings as "useless," and as an attempt to diminish workers' control over work, as the following quote illustrates:

> Carpenter: I have the feeling that at those foremen meetings you get reprimanded afterwards, if you said anything.
>
> Joiner [grimacing and nodding]: I think, it's one of the most indifferent events I've been to. (Field notes, workers)

Usually, a manager would lead such a work coordination meeting, presenting the time schedule for the next weeks and cross-checking it with the participating foremen in an attempt to coordinate work, as the following extract from the field notes illustrates:

> In the meeting, the manager explains that several different work crews, including carpenters, would start working together on ceilings by the next day. A carpenter reacts amazed, looking around the table as he and several other foremen had not known about the new time schedule. The manager continues his explanations in an agitated tone, pointing at the time schedule: 'You're not on the same page at all.' The meeting room fell quiet, and the carpenter, shaking his head, complains in a hesitant voice: 'I'm sorry. No offense, but all of a sudden I'll need to have almost 70 more men, if we are to follow that.' The other foremen start to laugh in the background, supporting their fellow colleague in questioning the schedule's feasibility. As the manager states clearly: 'Yes. That's right.' the room fell quiet again, and the carpenter, almost speechless, replies: 'That is … no offense, but we can postpone it just a little bit, right? I have to try and see if I can find some more men.' At this point, a second manager - visibly upset - reminds the foremen of their possibility to veto the time schedule: 'This can't come as a shock to you, can it? It's now 14 days since that schedule had been sent out […]. So we have to assume that you can meet it.' (Field notes, coordination meeting)

In this situation, the carpenter complained about the unforeseen amount of work that came with the new time schedule, questioning both the schedules' feasibility, and managers' capacity to plan accordingly. Planning work tasks and communicating future activities are part of managers' responsibilities and their daily practice. The carpenter's complaining about the sudden and increased need for new men was an attempt to expand workers' control over work processes, as the carpenter tries to negotiate managers' knowledge domain, and their jurisdiction to suddenly change the plan. The abovementioned situation is an example of complaining used to downplay existing boundaries between managers and workers as the carpenter insinuates that, compared to the manager, she/he knows the new work demands cannot be achieved in time, and that the sudden change may be a sign of managers' inadequate planning skills. Complaining also enabled the carpenter to deal with uncertainty by distancing himself from this troubling situation. However, complaining brought forth the existing demarcation of power and jurisdiction between managers and worker, as all foremen fell quiet when the manager replied: "Yes. That's right." His answer left no room for further negotiations. The second manager

manifested management's jurisdiction, demarcating themselves from workers, as he referred to the schedule sent by email. Due to workers' different practice domain, using verbal before written communication, the carpenters' control to veto sudden job demands was diminished. Workers described managers' use of the time schedule as legitimation to pressure workers and worsen their working conditions, as they experienced that work crews had to work even faster in order to catch up with the new time schedule. This is thus an example of how complaining serves as a mechanism to defend oneself against strained working conditions by downplaying boundaries towards the other group, and to safeguard one's jurisdiction.

Dealing strategically with criticism

Complaining serves a mechanism enabling managers and workers to strategically brush off external allegations. The following example shows how managers strategically used complaining to deal with criticism stemming on the one hand from the construction company's internal safety manager, and on the other hand from sub-contractor workers who had contacted the national OSH inspection authority to express their concerns. To illustrate:

> Manager 1: There is no doubt that OSH here on site has been incredibly under press due to lack of time. Had there been a little more time, one would have been better able to fit things in.
>
> Manager 2: There's no doubt that we've had to speed things up, and we've hired more people. There have also been a few accidents, due to several different reasons, which is a sign that it has become a little busier, and more people means more working hours. Then the risks are also theoretically greater.
>
> Manager 3: Plus, you don't know who enters the site. It may be a carpenter, who's just not thinking.
>
> Manager 2: Or a joinery guy who jumps on something that's loose.
>
> Manager 1 [in an insecure tone]: You just don't know people. (Field notes, managers)

Here, complaining may initially be perceived as an instance of tension relief (Kowalski 2002), strengthening the bonds within the group of managers, as they jointly handled the same difficult situation (Pouthier 2017). This is an example of complaining used as collaboration, as managers shared concerns supporting a shared understanding within the social boundaries of their group (Styhre 2010). However, at the same time, it is an example of complaining that serves as a mechanism enabling managers to brush off critique for unpopular decisions that may have resulted in an accident. They use complaining to justify the work site's accident statistic due to the tight schedule, being busy, and workers' behaviour, rather than being due to their own decisions and behaviour. Thus, managers may maintain that they are doing a good job, even though accidents still occurred. Complaining also enables managers' demarcation towards workers by stating that they do not "know people", indicating that they cannot be trusted, and that managers do not believe in workers' expertise.

Complaining was also used to cope with self-criticism, as managers repeatedly told us about their difficulties in prioritising work tasks, particularly when they had to fulfil several demands, e.g. being both the productive site-manager and the caring safety-manager at the same time, as illustrated in the following:

> Nine times out of ten, they [workers] don't have helmets or vests with them, so we're in the process of buying even more, we've bought ten of each I think. And they're already used up now, so we're going to have to buy some more, because people can't figure out to bring them with them. We could just say 'Well, then you have to go home again and come back with them.' But then just one more day goes by, and we can't do that either. (Interview, manager)

In the abovementioned excerpt, the manager described how his capacity to sanction safety rule violations, e.g. a missing helmet, is diminished by the project's tight time schedule. His professionalism of being a good manager is adhering to production time plans, which conflicts with his professional understanding of being a good manager, meaning to take care of his workers, not allowing them to work without helmets. Here, complaining serves to safeguard one's own professional standards and to brush off self-criticism, as the manager knows it is wrong to let workers work without proper safety equipment. Complaining stresses the distinctions between managers and workers, and as such is used for demarcation. Complaining serves as a mechanism to strategically deal with external criticism, brushing off allegations and safeguarding one's own professional standards, and to deal with self-criticism as an "escape route" to lift the burden of being expected to respond to more criticism (Styhre 2010, p. 801).

Blaming other occupational groups

Finally, we saw complaining was used as a mechanism to nurture the blaming of the other occupational group, in this case managers blaming workers – and vice versa. The opening quote of the paper illustrates the clear demarcation between managers and workers.

Similarly, the following quote shows the common discursive distinction between managers and workers:

> I receive the summary minutes of the safety meeting and all that, but I don't want to participate in all their [site-management] email correspondence going back and forth, and to be made responsible for something. […] all that legal stuff, they can keep that to themselves, as they are skilled in using it against us. (Interview, worker)

The above excerpt exemplifies how workers demarcated themselves from managers via their different knowledge and practice domains. Workers shared having practical expertise to execute work tasks on site, whereas managers voiced having legal knowledge and administrative skills in doing paper work in the office hut. Workers blamed managers for using email-documentation to control workers' job demands. Managers on the other hand demarcated themselves from workers, pointing out workers' disengagement in safety work, e.g. when workers did not use their possible influence to demand safe working conditions when given the possibility at safety meetings, as "very few actually set demands saying 'I want this and that stated in the summary minutes'". Managers are used to applying written documents to negotiate demands towards other project participants, whereas workers are not. Managers' interpretation of "workers being disengaged" may be justified in managers and workers' different practice domains, and with their differences in practicing safety (Grytnes *et al.* 2020).

The perception of workers using OSH complaints strategically is common among managers. Managers blamed workers for misusing OSH issues when they were unable to finish the job in time, as the following field note from a management meeting illustrates:

> Manager 1: Could you say that they [workers] use OSH proactively in order to make excuses?
>
> All the other managers [nodding]: Yes.
>
> Manager 1 [emphatically]: That's what they do.
>
> All the other managers: Yes.
>
> Manager 1: So there they have turned the argument around, and then they say 'Well, we can't work here because some steel plates are missing.'
>
> All the other managers [nodding]: Yes.
>
> Safety manager: That's how they use it, or even 'abuse it', yes, but in reality they are actually asking for some form of safety that we should have planned.
>
> Manager 2: But why do they do that?
>
> Manager 3: They just do it, because they're behind schedule. (Field notes, managers)

In the complaining situation described above, managers quickly acknowledged and validated each other's opinions that workers use OSH complaints strategically, signalling that they are experiencing similar situations with workers. On the one hand, complaining enables boundary-downplaying or collaboration, as managers identified themselves with their peers. On the other hand, complaining serves as a mechanism to enable blaming workers, thus permitting managers to justify and safeguard their jurisdiction as good managers, as OSH issues were raised by workers to "proactively" excuse being behind schedule, and not because of real safety issues. However, the safety manager, challenged their understanding, as he reminded managers of their responsibility, which the other managers quickly disclaimed.

Workers on the other hand complained that safety meetings held by management were not useful, and blamed management for using safety meetings and photo documentation of near misses to criticise workers' work performance, as described in the following:

> I don't think I can use them [safety meeting] for anything. A lot of nice pictures have been taken, where they [site-management] point out that this shouldn't happen. And it's usually all of us other workers again. As soon as it comes to access roads [site-management's responsibility] and that 'Arh, we can't do that', and 'I don't have time', and 'I've done it already'. I think it's a joke, and I think it's embarrassing. (Interview, worker)

Workers demarcated themselves from managers, drawing on symbolic and social distinctions between both groups. In the abovementioned quote, the workers complaining about managers' unwillingness to assure safety via access paths was described as "shameful" behaviour, making workers look superior. Here the message can be that certain things do not measure up to worker's expectations, conveying to colleagues that one has high standards. Managers were blamed for misusing photo documentation to criticise workers. Here, complaining reveals managers and workers' different practice domains, and with that their differences in practicing safety.

Complaining about managers' unwillingness enabled workers to maintain a critical position, safeguarding their professional expertise towards managers. Thus, they could continue their work without compromising their professional standards. Complaining served as a mechanism, enabling blaming the other group, and with that maintaining and nurturing existing boundaries.

On the one hand complaining fosters a sense of "we"-ness, through the construction of similarities

within the respective group of managers and workers. We identified complaining as boundary-downplaying or collaboration mostly within the group of managers and that of workers, not between managers and workers. Hence, complaining serves as intra-group collaboration as it enables bonding with their community of practice, addressing shared concerns. However, we showed one example of workers attempting to downplay boundaries towards managers in order to align the work process. Managers hampered this attempt as they defended existing distinctions between both groups. On the other hand, we presented various examples of complaining as demarcation between managers and workers, constraining engaged interactions through the unproductive focussing and handling of occupational differences. Thus, complaining serves mostly as inter-group demarcation, as it widens the inter-hierarchical division.

Discussion: a view of complaining as boundary work

In the study, we have explored the phenomenon of complaining conceptualised as boundary work (Langley *et al.* 2019) drawing in the notion of collaboration and demarcation, in order to investigate how OSH collaboration between managers and workers is linked to the practice of complaining, and why and how both groups purposefully influence their boundaries to negotiate OSH collaboration. Complaining as demarcation and/or collaboration serves to understand its relational dynamics within organisations and its consequences for the manager-worker relation and OSH performance. We have shown that complaining paradoxically achieves both collaboration and demarcation, as complaining designed to change working conditions in fact reinforces current conditions, with negative implications for cross-boundary collaborative safety practices.

Our first key contribution is that we have identified four complaining mechanisms concerning OSH, and developed a typology highlighting their associated relational dynamics: (1) Shifting responsibility for advancing OSH, (2) Defending oneself against strained working conditions, (3) Dealing strategically with criticism, and (4) Blaming other occupational groups. Through complaining, group members indeed do more than release frustration, they stress their similarities, which mobilises them to deconstruct boundaries and transcend their differences, or it can bring into focus differences in perspectives, goals and status across occupational roles, thus mobilising their differences to maintain boundaries.

Notably, through complaining about safety issues, not only addressing unsatisfying working conditions, but also unsatisfying work relations and existing power structures, workers signal their similarities of experiences in a stressful work environment that requires them to work under time pressure, with low control of work demands, and to safeguard a professional front of "getting things done". These are challenges that all construction workers face, independent of their occupational background. Likewise, managers complaining about unsatisfying working conditions, such as working under time pressure and juggling planned and uncertain ad hoc work demands, stress their similarities of experiences, which all managers face. Thus, complaining serves as boundary work through which both managers and workers construct similarities within their respective group. Here, complaining serves as a tool for collaboration among workers from different sub-contractors, and downplays differences, e.g. being a carpenter or a joiner. Managers alike use complaining as common ground for continual collective action, developing a shared understanding of the social reality, e.g. in how to adequately respond to unsafe working conditions. Our findings correspond with what Styhre (2010) calls "building a community" (2010 p. 800), as complaining provides a shared ground for action within ones occupational group. Complaining together about OSH issues requires an understanding about the social setting and the groups' traditions, and enables "brushing off criticism" (2010, p. 800).

However, complaining as collaboration or boundary-downplaying may support inward-looking perspectives (Bresnen *et al.* 2003). Strong social ties within one's occupational group may foster demarcation towards other groups, such as between managers and workers. Demarcation (boundary-making) shields the group of workers from potentially important safety information regarding potential hazards or OSH risks that are known outside their group. Complaining fosters demarcation between managers and workers by cultivating symbolic, social and occupational differences in e.g. work performance and status position. Strong status differences hinder the emergence of integrative forms of complaining, in that distance can constrain sympathy and understanding (Weeks 2004). The substantial power differences between managers and workers in our case, suggest that strongly perceived boundaries cannot be managed through complaining. Yet, workers also attempted to downplay existing boundaries towards

managers, e.g. concerning managers' lack of expertise as to how to plan and coordinate work properly, whereas managers blocked this attempt and defended existing distinctions towards workers drawing on their higher-status position and authority claims. Thus, our findings support previous research that higher-status professions tend to defend existing boundaries, while lower-status professions strive to change them (Abbott 1988, Battilana 2011).

Research on safety leadership (Wu *et al*. 2016) has shown that particularly the ability to gain subordinates' trust and respect, being able to motivate behaviour as well as displaying knowledge regarding relevant topics were especially predictive of safety performance and – leadership. Complaining as demarcation constrains such engaged interactions between managers and workers through the unproductive focussing and handling of occupational differences, such as knowledge domain and hierarchical position. Managers' complaining practices may thus hamper workers' participation, and affect their safety perceptions negatively, resulting in workers' distrust, declined motivation to work safely and potentially higher accident rates.

Our second key contribution is an elaborated processual constructivist view of boundaries as continually becoming (Langley and Tsoukas 2017), and as subject to human agency. Complaining as boundary work is situated and dynamic, as it is purposefully used to downplay boundaries across occupational roles as an attempt to align collaboration efforts in situations where workers tried to extend control over work processes. Whereas, in situations where managers experienced criticism, wanting to safeguard their professional standards, complaining is used to defend and sustain boundaries. Thus, we argue that complaining as situated collaboration and/or demarcation is theoretically interesting, as it adds to our understanding of why and how occupational groups construct their boundaries (Battilana 2011, Bucher *et al.* 2016), and how they can purposefully influence their differences affecting the manager-worker relation with implications for collaborative safety practices .

Implications for occupational safety and health

Several studies on OSH management have shown that social support and collaboration are imperative to improve safety climate and participation (e.g. Clarke 2013). Safety climate is an important predictor of safety behaviour and safety outcomes such as accidents and injury (Nahrgang *et al*. 2011, Griffin and Curcuruto 2016). A focus on managers and workers' boundary work is practically relevant as it may enlighten practitioners with knowledge on why and how both groups purposefully handle and influence their differences regarding OSH, and thereby enhance OSH collaboration. On a more practical note, we propose applying our complaining typology when performing analyses of safety barriers or preparing safety interventions. We point out the importance of employing communication and problem solving skills to nurture social awareness among managers, as safety leadership may improve when managers are sensitised to understand workers and peers' needs and expectations expressed through complaining for organisational learning. For instance, managers' communication and behaviours affect workers' safety perceptions (Zohar 2003, Zohar and Luria 2003, Kines *et al.* 2010), and transformational leadership behaviour (Bass *et al*. 1996) is associated with observations of positive safety practices (Grill *et al.* 2019). Thus, downplaying boundaries across occupational roles may be supported through transformational leadership behaviour and improved safety climate.

Complaining about safety is legitimate, and seems to be broadly accepted by both managers and workers as "the platform" to express all sorts of complaints. OSH as a recurring complaining theme may be understood as a "safe space", where boundaries are negotiated and reinforced, as little to nothing is perceived to be at stake. On the one hand, this may be the case, as safety work appears to have a low status among managers, who position themselves against safety work by stressing their different practice domains, e.g. not wasting important time doing inspection rounds. On the other hand, this may be the case, as workers are at minimal risk of being perceived as unprofessional when complaining about safety. Construction workers assert their sense of social value and self-esteem with strength and being professional (Thiel 2012). Thus, complaining about safety offers an opportunity to complain about precarious employment conditions or low levels of control, but still enabling workers to safeguard their professionalism, and with a low risk of losing their jobs.

Our findings suggest that future research may benefit from reviewing social mechanisms such as complaining, in order to discover communicational qualities and their impact on OSH negotiation. As the boundary work approach is foreign to both OSH research and the complaining literature, it provides the potential to theoretically elucidate analyses of social relations and OSH collaboration by focussing on

how boundaries are constructed, and how participants handle differences. Future studies may consider the wider organisational context, the construction industry's structural conditions and other relations, e.g. client-contractor, contractor-subcontractors wherein social mechanisms are at paly.

The study has some limitations, as we explored the phenomenon of complaining at only one construction site. There may be other complaining mechanisms and forms of boundary work in other empirical settings. We are aware of possible overlaps between the four complaining mechanisms. Nevertheless, they provide a joint language for analysing conflicted social relations and applying complaining conceptually and practically. Performing ethnographic studies always carry the methodological issue of affecting the subject under study. This applies to all studies of people (Foucault 1974), and is also an issue in natural sciences - where often times the subject under study must be affected, changed or destroyed in order to determine its properties or characteristics (Barad 2007). Usually, people under study will be affected in the direction that they display a more coherent and positive version of themselves, than they would show outside the gaze of the observer (Foucault 1977). In our study, this may be expected to be the case as well. Hence, we can expect, that both managers and workers under observation would seek to display themselves as more responsible and reasonable in their actions concerning OSH than would be ordinary practice. As the analysis shows, this is somewhat the case, but even so, this potentially positive self-display still contains numerous critical issues that assist in creating boundaries of different characters, and to complicate beneficial OSH work. Hence, this only strengthen the analytical arguments of the study and shows that the problems concerning boundary work in construction are perhaps even more serious than this study shows.

Conclusion

The boundary work analysis presented here reflects how managers and workers negotiate OSH performance through complaining practices. Drawing on observational, interview and archival data, we explored the general qualities of complaining situations, and developed a typology of four complaining mechanisms and their relational dynamics. Combining these findings with literature on boundary work, we developed a view of complaining as tool for collaboration and/or demarcation. Complaining in relation to OSH nurtures the (re)production of an "oppositional relationship" between managers and workers (Andersen *et al.* 2015, p. 646), hampering collaborative safety practices.

Our first key contribution is to OSH research and the complaining literature as the study highlights two relational dynamics: complaining enhances collaboration and/or demarcation. Understanding the importance of managing relational dynamics of demarcation becomes clear as safety improvements need to address conflicted relations in cross-boundary work settings. This study provides new insights on how complaining as boundary work influences the quality of OSH collaboration by showing how occupational groups purposefully influence their differences.

Our second key contribution is to the boundary work literature as this study contributes with an operationalisation of complaining as boundary work in order to empirically examine how boundaries are constructed. Importantly, the notion of boundary work is useful to analyse situated and dynamic safety negotiations between managers and workers in a conflicted work setting.

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ORCID

Katharina N. Jeschke http://orcid.org/0000-0002-3489-8934
Susanne Boch Waldorff http://orcid.org/0000-0002-7877-0780
Johnny Dyreborg http://orcid.org/0000-0002-5452-5596
Pete Kines http://orcid.org/0000-0002-8660-6366

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8. Appendices

Appendix 1: Interview Guide

Interviews with site and project managers at three construction sites

Intro

- Short introduction of me as a researcher and the research project
- Why I have invited to this interview
- Short clarification about interviewees' anonymity

Opening questions

- Could you please start by telling a bit about yourself and your job (name, age, training and educational background, professional experience)?
- Could you please tell me more about your role at this construction site?
- Could you please describe a typical workday?
- Could you please describe a typical work activity?

Follow-up questions:

- Could you please elaborate?
- What tools do you use (e.g. technical drawings, mobile phone etc.)?
- What IT programs do you use?
- How do you start a typical workday? Do you have examples?

Topic specific questions

- Could you please tell me more about your team?
- For how long have you been a manager?
- What is the best part of your job?
- What is the worst part of your job?
- Can you please describe your idea of a successful site/project manager?
- What do you do to succeed with your work?
- During my observations, I have noted that many talk about xxx (e.g. demands at work, collaboration with subcontractors etc.), how do you experience xxx?
- What challenges do you meet in your work?
- How do you handle these?
- Which safety risks exist at this site?
- Have you experienced situations at work that were dangerous?
- How do you integrate safety in your work activities?

Follow-up questions

- Can you elaborate?
- Do you have concrete examples?
- Why do you think that?
-

Closing questions

- Do you think that safety is prioritised even if the work schedule is tight?
- When do people accept risk-taking at work?

Outro

- Thank you

Appendix 2: Excerpt from In-Vivo Coding

In-Vivo Codes	First-Order Categories	Second-Order Themes	
"Solving problems ad hoc" *"Seeing with my own eyes"* *"Advising workers"*	• Situational judgments • Trust • Discretion	Balancing respective work tasks	Bridging
"Asking questions" *"Seeking information"* *"Negotiating compromise"* *"Reaching out to peers"*	• Professional experience and expertise • Social skills • Inducing collaboration		
"Walking to on-site office" *"Walking from on-site office"*	• Moving between office and site	Differentiating respective work tasks	Segmenting
"Putting on personal protective equipment" *"Taking off safety boots in office"*	• Changing clothes		
"Walking inspection rounds" *"Enforcing safety rules on site"* *"Instructing employees"* *"Taking pictures of safety breaches"*	• Ensuring safety on site		
"Documenting work progress" *"Calculating cost-benefits"* *"Controlling workers' work performance"* *"Negotiating cost-effective contracts"* *"Time planning"*	• Increasing efficiency and profitability in office		
"Looking the other way" *"Accepting safety breaches"* *"Not following safety rules"* *"Being in doubt"* *"Accepting risks to speed up work"*	• Doing trade-offs • Avoiding conflict with workers	Over-prioritising respective work tasks in lieu foothers	Demarcating

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COPENHAGEN
BUSINESS SCHOOL
HANDELSHØJSKOLEN

CO-AUTHOR STATEMENT

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1. Formulation/identification of the scientific problem to be investigated and its operationalization into an appropriate set of research questions to be answered through empirical research and/or conceptual development

Description of contribution:

Katharina identified the scientific problem and relevant field of investigation; we refined the research question collaboratively.

2. Planning of the research, including selection of methods and method development

Description of contribution:

Katharina conducted all empirical research for the paper, including selection of methods for data collection and coding.

3. Involvement in data collection and data analysis

Description of contribution:

Katharina collected all data and performed first analyses; we worked collaboratively on refining the analytical strategy.

4. Presentation, interpretation and discussion of the analysis in the form of an article or manuscript

Description of contribution:

Katharina took lead on every step of the process; we worked collaboratively on the final stages of analysis. Writing the manuscript has been a strong collaboration, in which we all have contributed with text, reflections, feedback and insights. All co-authors have approved the version of the manuscript to be published.

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1. Co-author (PhD student)	Katharina Jeschke Name
I hereby declare that the above information is correct	
Date	Katharina Christiane Jeschke Digitalt signeret af Katharina Christiane Jeschke Dato: 2021.07.07 14:30:26 +02'00' Signature

2. Co-author	Johnny Dyreborg Name
I hereby declare that the above information is correct	
8/7-2021 Date	Signature

3. Co-author	Susanne Boch Waldorff Name
I hereby declare that the above information is correct	
8/7 2021 Date	Signature

4. Co-author	Pete Kines Name
I hereby declare that the above information is correct	
08-07-2021 Date	Pete Kines Signature

5. Co-author	Jeppe Z. N. Ajslev Name
I hereby declare that the above information is correct	
09/07-2021 Date	Signature

6. Co-author	Name
I hereby declare that the above information is correct	
Date	Signature

7. Co-author	Name
I hereby declare that the above information is correct	
Date	Signature

8. Co-author	Name
I hereby declare that the above information is correct	
Date	Signature

CBS
COPENHAGEN
BUSINESS SCHOOL
HANDELSHØJSKOLEN

CO-AUTHOR STATEMENT

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Katharina identified the scientific problem and we collaboratively framed and formulated its operationalization into appropriate research questions.

2. Planning of the research, including selection of methods and method development

Description of contribution:

Katharina conducted all empirical research for the paper, including selection of methods for data collection and coding.

3. Involvement in data collection and data analysis

Description of contribution:

Katharina collected all data and performed first analyses; we worked collaboratively on refining the analytical strategy.

4. Presentation, interpretation and discussion of the analysis in the form of an article or manuscript

Description of contribution:

Katharina took lead on every step of the process; we worked collaboratively on the final stages of analysis and we all contributed to the structure and writing of the article, especially with framing academically formed contributions .

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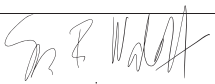
1. Co-author (PhD student)	Katharina N. Jeschke Name
I hereby declare that the above information is correct	
Date	Katharina Christiane Jeschke Digitalt signeret af Katharina Christiane Jeschke Dato: 2021.07.07 14:30:26 +02'00' Signature

2. Co-author	Susanne Boch Waldorff Name
I hereby declare that the above information is correct	
8/7 2021 Date	 Signature

3. Co-author	Morten Thanning Vendelø Name
I hereby declare that the above information is correct	
9/7-2021 Date	Morten Thanning Vendelø Signature

4. Co-author	Jeppe Z. N. Ajslev Name
I hereby declare that the above information is correct	
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