Constituting Performance Management

A Field Study of a Pharmaceutical Company

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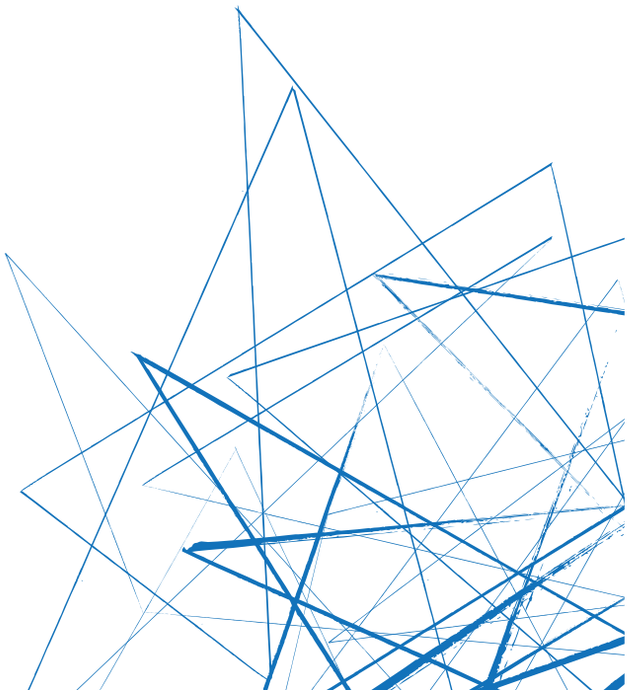

Jacob Brogaard-Kay

CONSTITUTING PERFORMANCE MANAGEMENT

A FIELD STUDY OF A PHARMACEUTICAL COMPANY

PhD School in Organisation and Management Studies | **PhD Series 28.2015**

CBS COPENHAGEN BUSINESS SCHOOL
HANDELSHØJSKOLEN

Constituting Performance Management

A field study of a pharmaceutical company

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Doctoral School of Organisation and Management Studies

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The Doctoral School of Organisation and Management Studies (OMS) is an interdisciplinary research environment at Copenhagen Business School for PhD students working on theoretical and empirical themes related to the organisation and management of private, public and voluntary organizations.

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1. Acknowledgements

Almost ten years ago, when I was working as a student assistant for a communications bureau, a colleague confessed to me that he was a little frustrated with his wife, as she was doing a PhD, to which I responded spontaneously, “Wow, I could never do that!”. Yes, doing a PhD sounded way too difficult and lonesome for me at that time, but ironically it happened anyway. Looking back on the last three years, I do not have any doubt as to how this project was realised. Of course, I can take some credit myself, but it was primarily because of all of you that this thesis is now done. I could not have done it without all of you, who accompanied me along the way and made this journey into a fantastic and eye-opening, if not somewhat bumpy and difficult, ride at times. Thank you so much!

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Lise, from our first meeting at IOA I knew you would be a perfect supervisor for me. And when I told you my choice, you suggested that I think about it, as choosing your main supervisor is a big deal; but I had to insist that I had already made up my mind. I have not regretted this for a second, and I am so grateful for your continuous support. Thank you for allowing me to be your first PhD student, and thank you for helping me complete this project and for making it a stimulating, yet challenging, learning experience that I will not forget. I have thought about what makes you so good, being well aware that I could never fully articulate your skills. However, I will try to describe a few of your features. Besides being great company, you are extremely good at allowing room for reflection; at keeping the focus on what is interesting; at challenging my inspiring thoughts with your great knowledge and insight; and at inspiring the people around you. And being so patient with

me, for instance, when I sent you my thirty-second version of Paper 1 on a Saturday. Finally, I am so grateful that I had a chance to really collaborate with you on Paper 3.

Ursula, I am always in a good mood when I leave your office. And it is not because you have a nice office (I mean, you have), but because you are such an energizing person. However, there is more to it than "just" the fact that you energize your surroundings. It is not just *how* you say and do things, it is also about *what* you say. I have really enjoyed our many conversations, where I have been amazed by your great theoretical insights and inspiration. In the writing – and journey – of Paper 2, I experienced this first hand. Thank you for being so encouraging and inspiring company, and thank you for supervising me so well along the way.

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And the biggest gratitude goes to my wife, Signe. Thank you skat, for your support and for your love. The gratitude I owe you is beyond words! This job has had its pros and cons. Sometimes I have been a quite flexible and present husband, but at other times you have needed to accept my auto-replies coming from a distant place. You have been very supportive and patient, and I think that we are both very ready for the moment when I will pass this work to someone who will actually read it for the last time. This thesis is dedicated to you. At last, thank you mom and dad, and Ingrid and Arne, for helping with the "Bendix sitting" and for all of your encouragement. I am a very happy and lucky man.

Copenhagen, May 22nd

Jacob

2. Summary

This PhD thesis studies performance management (PM) in complex organizational settings.

In both academia and practice, PM as a subject has received increased attention over the past couple of decades. In academia, it has been studied across several research paradigms and disciplines, through empirical cases, structured experiments and philosophical investigations. In practice, the subject is typically "owned" by Human Resource (HR) departments of large-scale international organizations. Typically, employees in all hierarchical positions of such organizations become acquainted with a PM system via the responsibility given to them at the beginning of the year for achieving a set of goals by yearend. A recurrent idea is that there should be a clear link between the organization's overall strategies and the sub-goals of each division, department, line managers and employees. However, this thesis studies closely how PM practices do not merely produce tangible outcomes and clear links between predefined goals and outcomes. Instead, it shows how PM systems and practices are constituted through endless interactions and relations between devices, texts, humans and events. Based on this way of studying the world, this thesis illustrates how PM practices play different roles in shaping the organizing of work in sometimes surprising ways.

This thesis is article-based and comprises three articles, each of which studies different aspects of how PM practices participate in producing particular realities in the pharmaceutical company BioTech (a pseudonym). More specifically, this thesis is shaped by qualitative empirical material, which was gathered during longitudinal field studies of the corporate HR organization and the research areas of BioTech. The articles that are presented in this work contribute to both theory and practice. Theoretically, this thesis adds to practice-based studies in the field of *management accounting* as well as to a particular strand of organizational communication, the so-called *Communication as Constitutive of Organization* (CCO) perspective. To practice, it contributes by

presenting empirical cases that represent organizational dilemmas, paradoxes and challenges while simultaneously discussing, in critical ways, how PM shapes organizational practice. This can be contrasted with the dominating managerial/consultancy way of discussing the subject of PM. Instead, a constructivist perspective is adopted which allows for studying how PM appears and acts through communication and framing activities.

The first paper describes and conceptualizes in detail how a new PM policy is communicatively constituted in and through specific organizational events. The paper adds to existing research by showing how PM system design features are malleable, relational and constituted in and through communicative events. The second paper looks at how the case organization's PM system interacts in surprising ways with its practical settings in stem cell research. Based on its findings, the concepts of work and control objects are coined and related to how PM practices participate in producing processes of innovation. Lastly, the third paper takes a more comparative approach by studying how various attempts at framing a new type of PM measure produce different organizational tensions and effects. This thesis ends by discussing how each of these papers, and the links between these papers, deepens our understanding of how PM works in practice.

3. Dansk resumé

Denne Ph.d.-afhandling undersøger performance management (PM) i komplekse organisationssammenhænge. PM har i de seneste årtier fået større og større opmærksomhed i både teori og praksis. PM været undersøgt i mange forskellige forskningstraditioner og fra mange forskellige perspektiver. Feltet er bredt og har taget afsæt fra cases, strukturerede eksperimenter og mere konceptuelle/filosofiske arbejder. I praksis hører PM som oftest til i større, internationale virksomheder, og det er typisk "ejet" af deres Human Ressource (HR) afdelinger. Normalt stifter næsten alle medarbejdere i disse virksomheder bekendtskab med PM på den ene eller anden måde, da de fleste virksomheder arbejder ud fra ud fra princippet om at skabe sammenhæng mellem virksomhedens overordnede strategi og de mål, som bliver sat for divisioner, afdelinger, ledere medarbejdere. I stedet for at se på, hvordan PM skaber sammenhænge mellem mål og resultater, så undersøger jeg med denne Ph.d.-afhandling, hvordan PM systemer og praksisser konstitueres gennem evigt foranderlige interaktioner og relationer mellem ting, tekster, mennesker og situationer. Dette syn på verden giver mulighed for at se nærmere på hvordan PM praksisser – ofte på forskellige og overraskende måder – er med til at forme organiseringen af arbejde.

Ph.d.-afhandlingen er artikelbaseret og består af tre artikler, som hver især og på forskellige måder undersøger, hvordan PM praksisser er med til at skabe specifikke virkeligheder i medicinalvirksomheden BioTech (et pseudonym). Afhandlingen er skrevet på grundlag af kvalitativt empirisk materiale, som er blevet indsamlet over en længerevarende forskningsindsats i case-virksomhedens globale HR-afdeling og i forskellige dele af virksomhedens forskningsområder.

De tre artikler bidrager både til teori og praksis. Ph.d.-afhandlingen bidrager til forskningsfelterne *ledelses-økonomistyring* (management accounting) og en strømning indenfor organisationskommunikations-litteraturen, nærmere bestemt *CCO-litteratur* (Communication as Constitutive of Organization). Afhandlingen bidrager til praksis i kraft af at præsentere sine empiriske cases, som repræsenterer organisationsmæssige dilemmaer, paradokser og udfordringer, samtidigt med at den, fra kritiske perspektiver, undersøger og diskuterer, hvordan PM er med til at forme forskellige organisationspraksisser. Denne tilgang står som kontrast til den sædvanlige ledelses/konsulent-tilgang til PM. Man kan kalde min tilgang konstruktivistisk, og denne tilgang giver mulighed for at undersøge, hvordan PM optræder og handler via kommunikation, og hvordan PM skaber forskellige effekter, når der bliver sat forskellige afgrænsninger, som påvirker hvordan PM optræder i praksis.

Den første artikel beskriver og konceptualiserer, hvordan en ny PM politik bliver konstitueret kommunikativt gennem konkrete situationer. Artiklen bidrager til forskningen ved at vise hvordan PM systemdesign er flydende, relationelt og konstitueret af kommunikative øjeblikke (communicative events). Den anden artikel ser på hvordan case-virksomhedens PM system interagerer med dets omgivelser på overraskende måder i en case fra en stamcelleforskningsafdeling. På baggrund af sine fund konkluderer artiklen, at det giver mening at definere begreberne arbejds- og kontrolobjekter (work and control objects), som relaterer sig til, hvordan PM praksisser er med til at skabe innovationsprocesser. Den tredje og sidste artikel tager en mere komparativ tilgang ved at undersøge, hvordan forskellige forsøg på at afgrænse ny PM-indikator er med til at skabe forskellige slags organisatoriske spændinger og effekter. Ph.d.-afhandlingen slutter af med diskutere de tre artikler i forhold til hinanden og ved at kommentere på, hvordan de i fællesskab er med til at udvide vores forståelse af, hvordan PM fungerer i praksis.

4. Introduction

> Representation is not about describing something which is already there. Rather it is about *making* the knower and *making* what is known. By creating the distinction between the knower and that which is known. And then concealing the connection. (Law, 1996, p. 283, italics in original)

Performance management (PM) systems are becoming more and more intensely used in both public and private organizations. They are used to stimulate and represent the performance of individuals, departments, and organizations. To accomplish their purposes, PM systems typically introduce goals, performance ratings, and appraisal schemes that are used to ensure that individuals, departments, and organizations perform their best. Based on a longitudinal field study, this thesis studies the particular realities that are formed when PM systems are constituted in order to represent and motivate performance. The aim of this thesis is to advance the understanding of the role that PM systems play in organizations.

With the quotation above, sociologist John Law problematizes a classical concept in accounting theory and practice. He talks about how the acts of representing something shape that which is sought to be represented. To represent something is a constitutive practice that can be understood as political or social (Robson, 1999). Often, the very act of making representations that fit organizational purposes are more important than making representations that represent the world in accurate ways (Mouritsen, 2011, p. 230). If this is true, the use of PM systems in organizations are relevant to study; for instance, how such systems are constructed, and how their practices shape what they are supposed to represent and stimulate. This study explores *how* PM systems are constructed in a global pharmaceutical company and *how* representations of PM shape processes of organizing in sometimes-unexpected ways. What motivated me to study the subject of PM was the

opportunity to study in detail, and over a significant period of time, *how* a global pharmaceutical company worked with developing PM systems and practices, and *what* these activities constituted in practice.

In the literature on PM, which spans several research fields, dominant approaches to describing PM in organizational settings often take a contingency approach to problematize the effects of such systems (Kilfoyle & Richardson, 2011; Mundy, 2010). These studies tend to study the link between formal system design and organizational effects. While recognizing the relevance of these studies, this thesis argues that it is important to analyse empirically the presence of PM in organizational settings from more practice-based perspectives, which are more sensitive to descriptions of how things do not necessarily happen the way that they were expected to happen. An increasing stream of literature in practice-based management accounting literature has contributed to making these perspectives more sensitive when it comes to how PM systems shape organizational phenomena (Ahrens & Chapman, 2007; Dambrin & Robson, 2011; Jordan & Messner, 2012). With the articles that comprise this thesis, I aim to contribute to this stream of literature.

While many different theoretical traditions within social sciences would qualify as relevant to approach the challenge of studying PM in its making and in its practical use, this thesis primarily basis its analytical approach on a communication perspective. More specifically, this study draws upon the so-called CCO (communication as constitutive of organization) perspective, which is a relatively new, and increasingly popular, stream of literature originating from organization theory. This thesis in particular draws upon contributions from Francois Cooren, Timothy Kuhn and Karen Ashcraft amongst others (Ashcraft, Kuhn, & Cooren, 2009; F. Cooren, Fairhurst, & Hüet, 2012; F. Cooren, Kuhn, Cornelissen, & Clark, 2011). In addition, it draws on Michel Callon's twin concepts

of framing and overflowing (Callon 1998a; 1998b). While these theoretical positions share similar ontological assumptions, their epistemologies and analytical vocabularies differ. In the coming chapter, which introduces the theoretical framework, I primarily elaborate on the CCO perspective. The additional theoretical elaborations unfold in the individual articles.

4.1. Theoretical and practical relevance of studying PM in its practical settings

Since the 1980s, public and private organizations of Western societies have invested in, and focused more and more upon, developing technologies to manage and measure performance (Power, 1999; 2004). Initiatives to do so have varied greatly, but the overall idea about developing and using management technologies to ensure that organizations become rational and efficient is relatively undisputed (Dambrin & Robson, 2011, p. 428). In public organizations, these developments have been part of New Public Management initiatives, while related interests and prioritizations of measuring performance in private organizations have produced technologies that practitioners typically identify as performance management (PM) systems and processes. In other words, the subject of performance management (PM), and concepts related to this subject[1], is considered powerful stuff not only in academia but also in practice. This importance is not only reflected in terms of quantity – studies of PM have increased across many research disciplines and the use of PM systems has exploded over the past couple of decades. It is also reflected by the fact that the presence of PM systems and practices is generally introduced as phenomena that make individuals and organizations perform better. However, for the past three decades both practitioners and academics have intensively discussed how best to apply PM in organizational settings, and typically the answers are rather instrumental. This study, by contrast, focuses on how communication plays a

[1] Such as performance-measurement, performance appraisal, performance evaluation, management control, management by objectives (MBO), and so on.

role in how PM comes about, as well as how these effects relate to the processes of organizing when companies represent and discuss "performances" in order to optimize them.

A standard PM system of a large-scale private organization typically formalises three key stages around which employees and managers are made accountable in different ways (Latham, Sulsky, & MacDonald, 2008). The global principles of BioTech's PM system, formulated by the GP department, adhered to these "stages": First, individuals are required to set ambitious but realistic targets at a given point in time. Typically, the process of setting targets is based on dialogue between the superior and the individual responsible for performing the target. Second, at a given point in time the targets need to be discussed, adjusted, and temporarily evaluated. Third, by the end of what is often defined as the performance cycle (often a time period of one year), the superior evaluates the performance of the individual. An ordinary way of doing so is that the superior considers how well the relevant targets match the activities that have been performed by the individual. In most large-scale organizations, such an appraisal process formally closes when the individual is given a specific performance rating, which represents the relative success of achieving the promised targets (Latham et al., 2008).

What initially inspired me to study the phenomenon of PM in organizational settings was the sense that a paradox, or a problem – without any analytical solution – existed (Rittel & Webber, 1973). Specifically, organizations generally seemed to want more and more control while simultaneously spending large amounts of energy on building arguments in support of the ways in which they offer work that allows for autonomy, freedom and individual development. It seemed paradoxical that neither of these two positions could ever succeed on entirely their own terms. It intrigued me that many of the theoretical contributions of the subjects of innovation and control in a management

accounting context revolved around arguments that were either for or against control (Davila, Foster, & Oyon, 2009). The literature I read at the start of this research journey therefore represented an area of controversies and contrasting opinions with regard to how performance management systems function in organizational settings. They would either be expected to hamper the organizing of unpredictable and fragile processes of organizing with their formalistic, mechanistic control practices (Abernethy & Brownell, 1997; Abernethy & Stoelwinder, 1991; Amabile, 1996), or they would appear as rational, necessary structures, which would work to efficiently support the needs of most businesses (Bisbe & Otley, 2004; Davila, 2000; Simons, 1995). Instead of sampling elements from each of these diverging rationales – to produce the truism that it was all about *balancing* control and flexibility in the right ways – I was motivated to study performance management in practice to get a better understanding of how performance management systems were actually produced, and how they actively shaped organizational practices. Although this thesis focuses narrowly on its empirical cases, the research is relevant to society at large as most organizations share an interest in developing and using PM technologies to represent, account for, and optimize what they define as their performances. Thus, the aim is to produce *reflections* regarding what we can learn about the practical making, and use, of an increasingly relevant organizational phenomenon rather than to be normative about what organizations should or should not do. With this overall interest and approach to the studying of PM in the case organization, this thesis aims to contribute to studies in organization and management studies, particularly the field of management accounting studies and the parts of organization theory that focus on studying communication as constitutive of organizing.

4.2. Studying PM in practice

This thesis builds upon a longitudinal field study from a global Scandinavian based pharmaceutical company, BioTech (a pseudonym). This study shows how new ways of measuring performance

become communicatively accomplished and how these accomplishments partake in constituting processes of organizing. This study primarily aims at studying performance management (PM) systems and practices in the research areas of the organization. Before my research was initiated, I had had interactions with the organization for over a year, and when my research proposal was accepted at the beginning of 2012, I got employed by a sub-department of BioTech's corporate Human Resource (HR) organization, the Global Performance (GP) department, to study how PM affected innovation in the research organization. The GP department holds the global and conceptual ownership of all mandatory PM processes in BioTech, as well as the principles that underpin various global remuneration strategies. From this position, I was able to reach out to different local areas of the organization that held an insider perspective on how PM concepts and policies were centrally developed (in GP) and locally applied (i.e. in the research organization).

The decision to focus on the use of PM in the research organization, as opposed to studying PM in all BioTech's divisions as was initially suggested by the organization's senior managers, was based on four reasons. First, the relationship between science and management interested me greatly. Second, colleagues in the GP department had told me that the R&D management team had recurrently questioned the idea of being part of a global and streamlined PM process because they viewed the R&D areas as being more complex than the rest of the organization. For instance, some research managers found the processes of formulating and appraising annual goals difficult as it was often unknown in the present moment what would generate value in the future. With this background in mind, I reasoned that the contrast between a highly complex work environment and a centralised PM system would generate visible controversies that would then allow me to *study the making* of PM systems – especially given that controversies often occur when important matters are dealt with. Third, seeing as I was also informed that the R&D management team had not offered

any particular solution to their identified problems with working with PM, I suspected that studying PM in the research area could possibly give me the opportunity to provide a *practical contribution* with my study. *Fourth*, it was generally appealing to focus on a single area in the organization, as this would enable a detailed, practice-oriented, and specific study. The next chapter presents my strategy of analysis, which offers both my ontological assumptions and also the key analytical ideas and concepts that I make use of in the three articles. Moreover, it introduces several relevant parts of the domain literature that I hope to contribute to with this study. The chapter ends with the presentation of my research questions and how each of the three papers addresses these questions.

5. Strategy of analysis

This chapter presents and discusses what I call my "strategy of analysis". This concept, which is inspired by Andersen (2003), implies that I have taken some deliberate choices related to my approach to the empirical material. Thus, by presenting my "strategy of analysis", I describe and discuss the main analytical choices that I have taken to make this study, as well as how these choices have shaped the identification and treatment of the empirical material. In other words, I see my strategy of analysis as having taken an active role in producing the arguments that this study presents (Law, 2004, p. 45). A consequence of this way of thinking is that it becomes difficult to differentiate between what my "empirical material" is and what makes my "theory" and "method" (Justesen, 2008, p. 56). However, although these concepts overlap, I maintain their distinctions for the sake of clarity in elaborating on how this thesis has been composed.

5.1. Ontological assumptions

I adopt a constructivist approach toward the study of how PM systems are produced and used in organizational settings. I would characterize my ontological assumptions as influenced by an anti-essentialist and relational perspective to the ways in which organizing happens. For this thesis, PM

systems and PM activities in BioTech are regarded as the objects of study. A consequence of my ontological assumptions is that I presume that these phenomena are constituted by multiple organizational activities, elements, and interactions and that they also take part in constituting organizational realities. One of the ways that I have tried to put these constructivist, anti-essentialist, and relational assumptions into practice has been to force myself to be specific in my descriptions of what I have observed in the field. These principles have helped me study PM as situational accomplishments (Järvinen & Mik-Meyer, 2005, p. 10) and as a phenomenon "in the making" (Latour, 1987). While this study cannot be identified as an actor-network theory (ANT) study, it has been inspired by how this literature suggests that researchers pay attention to the ways in which relations develop without privileging any actors, structures, or settings beforehand. The following paragraphs present more detail on how I have navigated through the process of defining my analytical approach. It starts by unpacking how ANT studies have assisted me in defining some of the basic analytical ideas that have later aided me in defining an analytical vocabulary useful to the study of PM in practice.

5.2. Focusing on symmetry, relations, and action

ANT grew out of the literature on Science and Technology Studies (STS), and sociologists Bruno Latour, Michel Callon, and John Law stand out as some of the most important contributors to the ANT tradition (Callon, 1986, 1998a, 1998b; Latour, 1987, 1996, 1999, 2005; Law, 1992, 1994, 2004, 2009). Since Latour and Woolgar (1979) collaborated on studying how "scientific facts" were "constructions", Latour has been explicitly inspired by semiotic aspects of how facts are constructed (Keith & Regh, 2008, p. 219). Law even defines ANT as "a disparate family of material-semiotic tools, sensibilities and methods of analysis" that help the researcher treat everything in the social and natural worlds as "a continuously generated effect", which is made through webs of relations (Law, 2009, p. 141). In these webs of relations, "translation" takes place,

meaning that realities change through their relations (Callon & Latour, 1981, p. 279; Callon, 1986, p. 19; Latour, 1999, p. 177). The anti-essentialist perspective argues that researchers should have a symmetrical interest in humans and non-humans, and that we should study relations between actors. Furthermore, ANT studies reject the use of a range of concepts that have dominated reasoning within the social sciences, such as the divisions between "subject/object", "structure/agency", and "micro/macro" (Latour, 1999, p. 180, 2005, p. 75). Inspired by this literature, three basic analytical ideas characterize my study: the application of 1) a principle of *symmetry*; paying attention to how 2) organizing happens as effects of *relations* between actors (or communicative elements); and the idea that 3) empirical phenomena should be studied as they appear in *action*. The next paragraph provides additional elaboration on these ideas in order to delve further into how they have impacted the organizing and assembling of the strategy of analysis.

According to Latour (1996), the principle of *symmetry* necessitates that the activities of human and non-human actors be studied from a perspective that recognizes that both types of actors are, in principle, equally capable of shaping the network relations that they take part in forming. How they matter is an empirical question. To describe these relations, ANT literature makes use of the concept of "actor" (and "agencies"), which Latour defines as "any thing that does modify a state of affairs by making a difference" (Latour, 2005, p. 71). However, as Latour (1999, 2005) and Law (2009) note, we need to study the development of network *relations* if we want to describe what characterises empirical phenomena, or actors, of such networks. This emphasises the anti-essentialist assumptions that are adopted in this study. These assumptions also relate to how the notion of "an actor" has been problematized in ANT literature, given that this notion could be criticized for implying that actors exist outside of (or before) their network relations. However, according to ANT studies, CCO literature, and Callon's concepts of framing and overflowing,

actors do not *have* power, but rather become relatively stronger or weaker through their network activities or "attachments" (Latour, 2005). Thus, actors are made through their relations, and hence attachments "come first" (ibid., p. 217). In other words, organizational *action* becomes highlighted as the relevant starting point of the analysis. Agency, from this perspective, becomes emphasized as shared, collective, distributed or hybrid and not something that can be ascribed to actors, structures, or systems a priori (Latour, 1996, 2005). Nothing is given a priori, and everything becomes an empirical question. Hence, an underlying assumption of this thesis is that if we want to advance our knowledge about what PM systems do, we need to study how network relations change.

I characterize my analytical approach taken in the first two articles as "communicative". In these articles, I draw upon CCO scholarship, which is heavily inspired by ANT scholarship. The third paper uses Callon's concepts of framing and overflowing (1998a; 1998b), which can also be identified as growing out of the ANT tradition. Both traditions – CCO literature and Callon's twin-framework – share the three ontological assumptions that were just presented. With their relational approaches, each of the three articles in this thesis describes how PM systems and practices develop over time. Likewise, this study shares all three of the theoretical assumptions described above in studying how PM systems and practices appear. The next paragraphs present how the CCO perspective, based on these basic ontological assumptions, have inspired the assemblage of analytical concepts used in this thesis. In addition, the following paragraph specifically introduces this communicative perspective.

5.3. A communicative approach to study PM in practice

While the relevance of studying PM in "the making" and "in action" has already been justified, the reason for why I have chosen to apply a communication perspective to describe these activities needs an explanation. To begin, I would like to emphasise that I believe several other qualitative

schools of thinking within the social sciences, anthropology, and psychology could have been equally capable of describing how PM appears. Many perspectives could, in related ways, describe the situated and relational aspects of how processes of organizing depend on *interactions*, *dialogues and relations*, as well as on the production of ideas, arguments, numbers and decisions. Few perspectives, however, have developed analytical vocabularies that help describe the ways in which *non-human actors*, such as PM systems, could potentially participate in these processes in relevant ways. This is also the case for the vast field of communication studies, which, for instance, comprises the fields of organizational communication, rhetoric, semiotics, and linguistics. Given its inspiration from ANT studies, the CCO perspective makes an exception and operates with a broad definition of what qualifies as communication. Nevertheless, one could ask why not stick with ANT in the first place? Based on my interest in studying in detail the *situated* development and use of PM while paying attention to how *interactions* become highlighted, I found that the CCO perspective was a better choice. While still studying *relations*, CCO scholarship unfolds not only what happens, i.e. what is said and done, but also *how* it is said and done as opposed to highlighting the status of the *network*. Besides, no clear-cut ANT study has, at least to my knowledge, included such details from the actual interactions that characterise these empirical relations, although Callon and Latour have previously included "acts of persuasion" in their definition of translation (1981, p. 279). The following paragraphs introduce the CCO perspective and some of the core concepts that I make use of in this thesis.

5.4. The CCO perspective

The CCO perspective can still be considered an emerging perspective, with intellectual roots in various traditions (Ashcraft et al., 2009; F. Cooren et al., 2012, 2011). It makes up a particular stream of literature on organizational communication theory, and has been hugely inspired by ANT. It has also been known as the discursive elaboration of ANT (Fairhurst & Cooren, 2009, p. 470).

The main argument of the CCO literature is that *communication constitutes processes of organizing* (Taylor, 2011a). This argument, however, becomes elaborated in many different ways. While it is common for CCO scholars to place themselves in the intersection of organization studies and communication studies (F. Cooren et al., 2011), they do so by carrying diverse theoretical baggage such as Speech Act Theory (F. Cooren & Taylor, 1997), systems theory (Schoeneborn, 2011), structuration theory (McPhee & Zaug, 2009), and discourse theory (F. Cooren, Matte, Taylor, & Vasquez, 2007). Its methodologies for researching the relationship between communication and organizing are diverse, and include contributions utilizing discourse analysis (Leclercq-Vandelannoitte, 2011), network analysis (Blaschke, Seidl, & Schoeneborn, 2012), text-conversation analysis (Kuhn, 2008) and, finally, empirical and theoretical accounts on the communicative relationships between materiality and discourse (F. Cooren et al., 2012; Dale & Burrell, 2008; Schoeneborn, 2013; Swales, 1998). The two latter positions appear to be most relevant for the analytical perspective that is used in this thesis (in Paper 1 and Paper 2). Across these streams, however, the CCO literature remains highly inclusive in its definitions of what it means by communication (Cooren et al., 2011, p. 1151). Ashcraft et al. define communication as "the ongoing, dynamic, interactive process of manipulating symbols toward the creation, maintenance, destruction, and/or transformation of meanings, which are axial – not peripheral – to organizational existence and organizing phenomena" (2009, p. 21), and, as Kuhn notes, this highlights that communication is not a vehicle for representing meanings, but rather a process of meaning production through communicative action (Kuhn, 2012, p. 548). The following paragraphs briefly present some of the analytical concepts from the CCO literature that have been used in Paper 1 and Paper 2. These concepts have been selected due to their adherence to the previously described thoughts about symmetry, relations, and actions.

5.5. Studying "communicative events", "texts" and "conversations"

As Cooren, Fairhurst and Hüet (2012) state, the CCO perspective offers scholars a framework that recognizes that both materialities and discourses can act communicatively (p. 296). The authors claim that instead of focusing on making distinctions between discourses and materiality, analysts should study "the multiple ways by which various forms of reality (more or less material) come to *do things* and even *express themselves* in a given interaction" (Cooren, Fairhurst, Hüet, 2012, p. 296, italics in original). In line with this argument and its emphasis on the "interaction" as the site where communication happens, the authors highlight one of the main premises of CCO scholarship: CCO researchers should never leave "the site" where communication happens (Ashcraft, 2009, p. 21). Therefore, "communicative events" and "actions" should be prioritized as empirical focus points, as this is where communication appears to work as a mechanism of organizing (Ashcraft et al., 2009; F. Cooren et al., 2011; Fairhurst & Cooren, 2009). Central to CCO literature are the notions of *text*, *conversation* and the *communicative event*. While Paper 1 primarily draws upon the concept of the communicative event and how this develops and acts, Paper 2 primarily draws upon the "conversation-text" dialectic.

In CCO literature, *texts* are broadly defined as the "substances" upon and through which *conversations* get shaped (Kuhn, 2012, p. 551). Organizing happens through these conversations between texts (Taylor & Robichaud, 2004). However, as suggested by several CCO scholars, organizing also takes place as effects of the interrelations *between* communicative events (F. Cooren et al., 2011; Kuhn, 2012; Schoeneborn, 2013). To study these texts and conversations (or communicative elements in general), *communicative events* must be studied, as these are the sites where conversations take place (Kuhn, 2012). As Fraser notes, studying events, by definition, forces any participant of the event to critically evaluate and reflect upon what is taken for granted as facts at the event, because identities and relations acquire definition through events (Fraser, 2007, p.

65). Hence, focusing on communicative events opens an empirical space where associations between entities come into "relative existence", as expressed by Latour (1999, p. 161), as actors interact through their relations in empirical events. The emphasis on studying events helps to advance thinking that challenges often-dominating perspectives (such as in management accounting studies), which often assume that specific contingencies work as antecedents to the objects that are being studied. From my CCO-inspired vocabulary, however, these entities are typically identified as different communicative elements.[2] In addition, studying texts, conversations and communicative events helps me to study communicative action in *concrete* ways without ascribing relevance or effects to empirical phenomena a priori. Being concrete enables me to describe what I see without necessarily using the meanings that have been produced by others.

5.6. Domain literature

Performance management systems and practices in organizational settings have been intensely studied in so-called management accounting studies. This is the main reason why a large part of this thesis aims to contribute to this field of research. Another significant reason why this literature plays a big role for this study is that it offers rich and nuanced perspectives to support practice-based studies of PM systems in action. The first and third articles aim to make both empirical as well as theoretical contributions to management accounting studies. The second article draws upon relevant perspectives from management accounting studies while contributing to CCO scholarship. The following paragraphs further introduce management accounting literature as a relevant research field for this study.

[2] In Paper 1, such communicative elements refer to "talk", "texts" and "artefacts", while Paper 2 primarily operates with a *broad* definition of "text", which emphasizes that these communicative elements can be regarded as texts in conversation.

5.6.1. Contingency-based literature in management accounting

While several field-studies in management accounting have taken an ANT inspired approach to the study of how actors develop, namely, how they form networks and stabilize facts while translating organizational realities (Justesen & Mouritsen, 2011), dominant literature in this field has typically approached their empirical material in instrumental ways, and often from a contingency perspective (see Mundy (2010) for a review of contingency theory in accounting research). These studies primarily adopt positivist perspectives to the study of PM systems and typically ascribe agency *to* these systems (cf. Gerdin & Englund, 2011; Kilfoyle & Richardson, 2011). In addition, this literature often aims to produce new insights about how to best design features of PM systems in order to optimize their practical effects (Chenhall, 2005; Ittner & Larcker, 2001; Selto, Renner, & Young, 1995), by developing and designing proper "structures" (Flamholtz, Das, & Tsui, 1985; Malmi & Brown, 2008; Sandelin, 2008), "rewards" (Gibbs, Merchant, & Vargus, 2004; Malina & Selto, 2004; Malmi & Brown, 2008), or other forms of control elements that are identified as antecedents for higher performance (Ter Bogt & Scapens, 2012; Tessier & Otley, 2012; Bisbe, Batista-Goguet & Chenhall, 2006). In addition, other popular subjects examined the effects of, for instance, "objectives" and "strategies" in different contexts (Berry, Coad, Harris, Otley, & Stringer, 2009, p. 4). Although this is far from a full review of the comprehensive and thorough research that has been done in management accounting studies since the 1960s, it indicates how the dominant literature of this field tends to be occupied with studying, in causal ways, how organizational effects, such as performance, depend on how strategists design, shape, and structure a series of popular pre-identified criteria or measures.

5.6.2. Practice-based studies in management accounting

In contrast to the literature reviewed above, this thesis makes its theoretical contributions with the first and third articles that this thesis draws upon, and also aims at contributing to practice-based

literature in management accounting studies. This practice-based literature represents a growing but very established stream of research in the accounting field (Baxter & Chua, 2009), and it neglects to follow the dominant contingency perspectives that were briefly introduced in the previous paragraph. Practice-based studies in management accounting are generally characterized by a focus on organizational actors in empirical situations (e.g. Ahrens & Chapman, 2007; Andon, Baxter, & Chua, 2007; Baxter & Chua, 2009; Burchell, Clubb, Hopwood, Hughes, & Nahapiet, 1980; Chua, 1995; Briers & Chua, 2001) while studying "accounting in action" (Hopwood, 1987, p. 209). This stream of literature has also been identified as "alternative" (Baxter & Chua, 2003), "critical" (Ahrens et al., 2008) and "qualitative" (Parker, 2012) studies on management accounting phenomena, and it typically explores how a variety of management technologies and practices become constitutive of different organizational arrangements and of "the social" (Hopwood, 1987, p. 213). While describing the paradoxical aspects of studying accounting from a distance, as indicated in the abovementioned review of contingency-based accounting studies, Chua here highlights how accounting becomes empirically visible through "talk and formal reports":

> Accounting is a practical activity – it surfaces in talk and formal reports generated by human actors and expensive enterprise resource planning systems on a regular basis (monthly, weekly, yearly, etc.). It is distinguished through reality and folklore by the very routine nature of its activities. Yet, we often choose not to study it as a situated social practice. (Chua, 2009, p. 493)

As already described, this study prioritizes the study of communicative aspects of organizing. Hence, its analytical toolbox is particularly well equipped to describe what Chua here relates to when accounting practices appear as talk, reports, and communicative activities that can sometimes be identified as routines. In brief, the practice-based research of this field examines how different management accounting systems and tools are used by organizational actors in everyday situations

(Dambrin & Robson, 2011; Jordan & Messner, 2012; Jørgensen & Messner, 2010; Mouritsen et al., 2009; Revellino & Mouritsen, 2009; Fauré & Roleau, 2011). In the more ANT-inspired practice-based management accounting studies, attention is paid to technologies and devices. According to Dambrin and Robson: "To understand performance measurement as a practice implies […] an exploration of the concrete instruments, software, and calculations that link 'managers' and the 'managed'" (2011, p. 429). In different ways, the papers of this thesis relate to several of these contributions' practical concerns about how PM is used and developed in its practical settings.

5.7. Research questions

Based on my described interests in studying how PM systems and processes are developed and used in practice, this thesis addresses the following overall research question:

- ***How are performance management (PM) practices constituted in the research areas of BioTech, and how do such practices participate in shaping processes of organizing?***

The above question is broad, and each of the three papers contributes in different ways to answering more specific sub-questions that relate to this overall research question. Each paper is presented after this paragraph, but for the sake of clarity I list these additional research questions below:

Paper 1:

- How do text, talk, and artefacts constitute behavioural targets, and how does this challenge the dominant understanding of enabling and coercive performance management systems?

Paper 2:

- How do performance measurement elements and laboratory matters interact, and how do such interactions challenge the organization of innovation?

Paper 3:

- How is behaviour framed as a performance management object in BioTech, and which tensions and concerns do these framings produce?

5.8. The roles of the three articles

Before presenting each of the three papers in more detail, I first describe how their empirical and theoretical focus points relate to each other as well as to the overall research question. The figure below (Figure 1) helps explain how each of the papers relates to this overall research question:

Figure 1. Overview of how the three papers relate to the overall research question of this thesis.

5.8.1. Paper 1:

Paper 1 studies the making of a new performance measure – so-called behavioural targets. It argues that such measures are constituted in and through communicative events that comprise interactions between several communicative elements: artefacts, texts, and talk. Paper 1 contributes theoretically to the literature within management accounting studies that is focused on developing enabling PM measures, by showing how qualities of PM systems cannot be ascribed to their design features. Likewise, the study contributes to the understanding of how artefacts, talk, and text matter for the development of PM systems. I am the sole author of Paper 1, and it has been resubmitted to *Critical Perspectives on Accounting* in the same version as it appears in this thesis. I am currently awaiting the editor's decision.

While Paper 1 shows *how* PM systems are communicatively accomplished in and through communicative events, Paper 2 studies how BioTech's PM system shapes processes of organizing innovation in the research areas of the organization. Hence, the empirical setting changes from studying the sites where *PM is made* to studying the sites where *science is made*.

5.8.2. Paper 2:

Paper 2 studies how PM intervenes in the organizing of innovation. It shows how "control objects" and "work objects" interact and have multiple roles, depending on the conversations that they take part in. The study contributes to organization theory, first, by offering a communicative approach to understanding the multiple roles of objects and, second, by unfolding some of the challenges that organizations face when managing processes of innovation with PM systems. It also contributes to CCO literature by developing the "conversation-text" dialectic with the integration of particular types of textual elements. Lastly, Paper 2 contributes theoretically to organization studies by adding new dimensions to the concepts of "text" and "conversations", which have been developed within CCO literature. The article shows how texts can have multiple roles depending on the type of

conversations, i.e. the degree to which a common vocabulary for the relevant participants exists. I wrote Paper 2 in collaboration with Ursula Plesner of Copenhagen Business School, Department of Organization. We are planning to submit this article to *Organization*.[3]

5.8.3. Paper 3:

Paper 3 directly relates to Paper 1 by studying the "same" empirical phenomenon of behavioural targets (which is here identified as BMPs). However, the way Paper 3 studies its empirical material differs from the approaches taken by Paper 1 and Paper 2. By drawing upon Callon's (1998a; 1998b) concepts of framing and overflowing, the study highlights the various intended as well as unintended effects related to different framings of behavioural targets across different research areas in BioTech. The study contributes to studies focused on the subject of so-called Organizational Citizenship Behaviour, which has recently been introduced to the management accounting literature as well as to practice-based studies of this latter domain. Paper 3 can be understood as creating a sort of synthesis in the way that it both extends Paper 1's focus on behavioural targets while at the same time expanding the empirical scope of Paper 2's focus on studying the effects of BioTech's PM system. I wrote Paper 3 in collaboration with Allan Hansen and Lise Justesen of Copenhagen Business School (Department of Operations Management and Department of Organization). We are planning to submit this article to *Accounting, Organization, and Society*.

6. Case description

Each of the three papers in this thesis studies different aspects related to performance management (PM) in the case organization, BioTech. BioTech is a global, successful pharmaceutical company headquartered in Scandinavia. The organization operates in more than 40 markets, employs more

[3] Please note that due to Organization's style manuscript preparation guidelines the practice use of quotations distinguishes a bit from how quotations are throughout the rest of the thesis.

than 35,000 employees, and holds a leading position in several clinical treatment areas. At BioTech, I was employed by the corporate HR division, more specifically, the so-called Global Performance (GP) department, throughout my PhD studies (from 2012 to 2015). The GP department has global ownership of the overall performance management process as well as BioTech's global remuneration policies. Having "ownership" of these processes effectively meant that the GP specialists were responsible for supporting local HR Partners in different areas of the organization (a key account structure) in terms of driving smooth and effective PM or remuneration processes. However, it also referred to the fact that these consultants worked on an ongoing basis to further develop BioTech's global strategies in the areas of PM and remuneration. The department employed 12 specialists with diverse educational backgrounds, typically within business administration/economics.

The three papers, each of which represents its own specific case, occur in three different places in the organization. Nevertheless, each of them focuses mainly on organizational activities that take place in BioTech's research organization. Moreover, all three papers draw on empirical material that has been gathered from the corporate HR organization, usually the GP department. Hence, each of the three papers describes organizational events, which are represented through the perspective, or at least some of the empirical material from the GP department. The organizational chart below (Figure 2) provides an overview of where in BioTech the three papers take place:

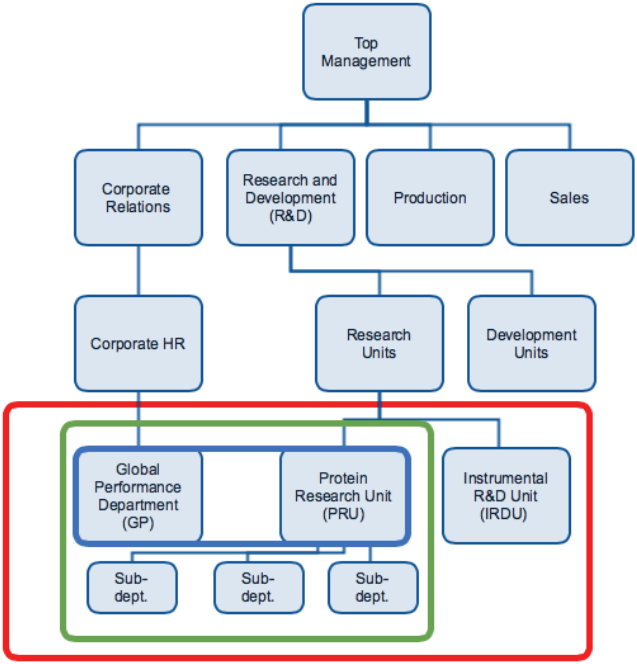

Figure 2. Overview of where the empirical material has been gathered in BioTech in terms of the three articles.

The first paper – hence the first case – studies the making of behavioural targets through a series of management seminars that took place in the Protein Research Unit (PRU). Its empirical focus is marked with *blue* in the figure above (Figure 2).

The second paper – hence the second case – studies how different "work" and "control" objects interplay with performance management elements in processes of innovation, primarily in one PRU sub-department. Its situated focus is marked with *green* in the figure above (Figure 2).

The third paper – and the third case – focuses on how different "framings" of behaviour in PRU and in the Industrial R&D Unit (IRDU) result in different organizational effects. Its empirical focus is marked with *red* in the figure above (Figure 2).

Given that all three papers elaborate on specific themes, problems, and opportunities within PM, the following section details how the global PM system in BioTech has been designed.

6.1. BioTech's global PM system

The organization's PM process is run through the so-called People Performance (PP) system, which enables its users to upload goals, comment on their progress, and appraise their success through attributed performance ratings that are inscribed into the employees' individual PM templates, so-called PP forms. The ratings are defined on a 5-step scale with the following categories: "does not meet expectations" (DNME), "approaches expectations" (AE), "meets expectations" (ME), "exceeds expectations" (EE) and "outstanding" (O). These ratings shape the calculation of the employees' annual cash bonuses.

The PP system builds upon three mandatory annual activities, which represent the "performance cycle". At the stage of "goal setting", managers and employees submit goals into the PP form (they "plan"), at the "mid-year review" the status of the goals is re-visited (they "review" and "plan"), and at the "year-end appraisal" all individuals receive their annual performance ratings (they "review"). In between these planning and reviewing activities, performance unfolds. The process represented below (Figure 3) is taken from a management seminar (PRU Sem2, 2013).

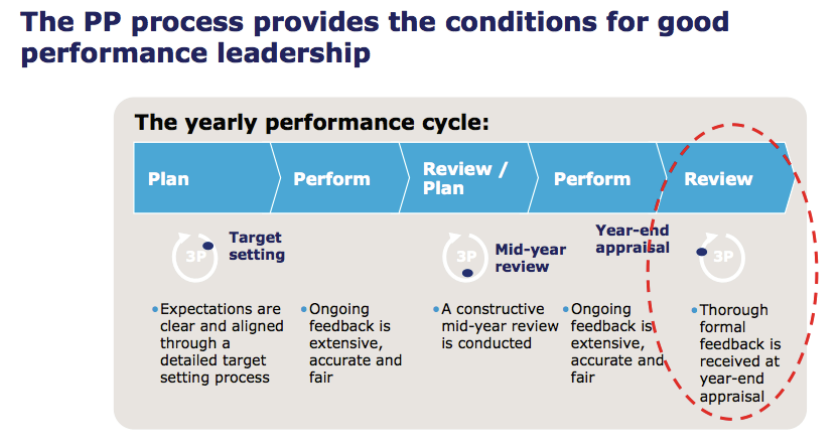

Figure 3. PowerPoint slide from a training session for line managers, which presents the annual PP process at BioTech.

As defined by the PP process steps, "Goals should be linked to the Balanced Scorecard of the unit" (BioTech, intranet, 2014), and "to ease the completion of the individual PP form EVP, SVP, CVP and VP [executive, senior, corporate, and vice presidents, respectively] Balanced Scorecards are uploaded to the PP system" (ibid.). In the PP process, the presence of the Balanced Scorecard approach is also visible in how its vocabulary has shaped the PP system's user interface, for instance, the "goal form", which is structured into fields, is intended to help the formulation of an optimal goal with the following descriptions: "Critical Success Factor", "Key Performance Indicator", and "Target" (BioTech intranet, 2014). The process of formulating targets was often highlighted as being "SMART", as indicated below (Figure 4) with the letters highlighted in red on the training material for goal/target setting:

Figure 4. Training material for employees and managers on how to set good business targets.

While business targets represent the "results" that people need to achieve, behavioural targets represent the activities that people perform to reach their results. The next paragraphs briefly explain these two types of targets further.

6.2. Behavioural targets

BioTech's Production division introduced the organization's first formalized initiative on behavioural targets in 2008. This first-mover initiative was welcomed by the corporate HR organization, and the Production division's key account manager – responsible for performance management – helped develop a matrix that could be used by managers to translate the impact of employees' behaviours and result in the final performance rating. Inspired by the Production division, however, a sub-department in the corporate HR organization, the GP department, in 2010 started looking into the possibilities of defining a global minimum benchmark for using behavioural performance measures as part of the mandatory PM process. Throughout these processes, specialized employees of the GP department collaborated with external consultancy firms. Interestingly, these development processes started to overlap over time with another corporate project on redefining the organization's global value framework, the so-called BioSphere

Framework[4]. Inspired by the development of this value framework, the GP department aimed at integrating basic ideas on ethical behaviours, sustainability, and accountability. There seemed to be an obvious resemblance in the way behavioural targets focused on the "how" part of the work with the way BioSphere emphasised the importance of "sustainable work". In 2011, top management endorsed the work done by the GP department and accepted the focus on behaviours in the global PM process as a new "minimum benchmark". Later, the new corporate policy was inscribed into the organization's standard operating procedures (SOP) on PM as a requirement for all managers and employees to "[discuss] business goals (the what) *and* behaviours (the how)" (internal SOP document, 2014, italics added). The SOP also unfolded how "the purpose" of the PM process was "[t]o define business goals for the individual employee for the relevant performance year, and for manager and employee to have a discussion on how to achieve those goals."

At no point in time had the corporate HR organization expressed any requirements regarding specific "weights" or percentages on the "impact" of employees' behaviours on the final rating. All business divisions, including senior vice president areas, were allowed to translate the overall requirements for discussions on behavioural targets differently. However, the corporate HR organization shared a range of learning materials, developed by the GP department and external consultancy bureaus, on how a vast variety of subjects related to PM. These sharing activities occurred through BioTech's intranet portal. Moreover, all business divisions had been assigned their "own" key account manager, situated in the GP department, who was employed to ensure ongoing dialogue with regional and local HR business partners who could address questions or doubts related to the way PM processes could ideally be outlined. Likewise, each key account manager also had a responsibility to ensure regional compliance with the corporate minimum benchmarks on performance management. The figure below (Figure 5) shows the corporate HR

[4] The Biosphere Framework is BioTech's value statement, the so-called "essentials".

organization's strategy for performance management, which was also recurrently communicated to corporate HR managers:

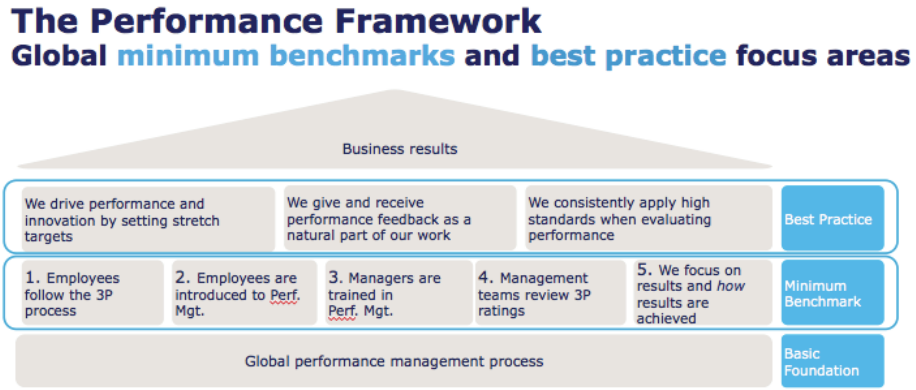

Figure 5. "The house" (internal document, corporate HR org., 2013), which presents the new corporate minimum benchmark guidelines for performance management in the case organization.

As indicated above with "the house" and its mapping of "minimum benchmarks" and "best practices" related to the global PM process, the presence of both "results" and "*how* results [were] achieved" were presented as core co-constituents of organizational performance. However, all BioTech's business divisions and their respective senior vice presidents (SVPs) had full autonomy in terms of how to live up to the depicted minimum benchmarks, as long as the overall organizational values were followed in accordance with the BioSphere Framework and its declared values (or "essentials").

6.3. Business targets and results

Business results can be understood as targets that make individuals accountable for achieving specific results within the given performance year. According to the corporate guidelines, all business targets have to be attributed a specific "ratio" or "weight" that, dependent on the local

setting, refers to how much time the employee is expected to spend on the task in the given performance year or merely to how important the target is. In some of BioTech's business areas, such ratios/weights are attributed to the individual's behavioural targets. The figure below (Figure 6) shows an example of a scientist's PP form, which shows one of the scientist's seven business targets (the PP form also includes 3 behavioural targets). The red marks indicate when the specific texts were written into the PP form. As indicated in the column furthest to the right, the scientist has chosen to appraise her performance on this specific target to an EE ("exceeds expectations") while the manager has chosen to appraise the scientist's performance on this target to an O ("outstanding"). However, only one final performance rating is given based on an overall appraisal of each individual target (business targets and behavioural targets):

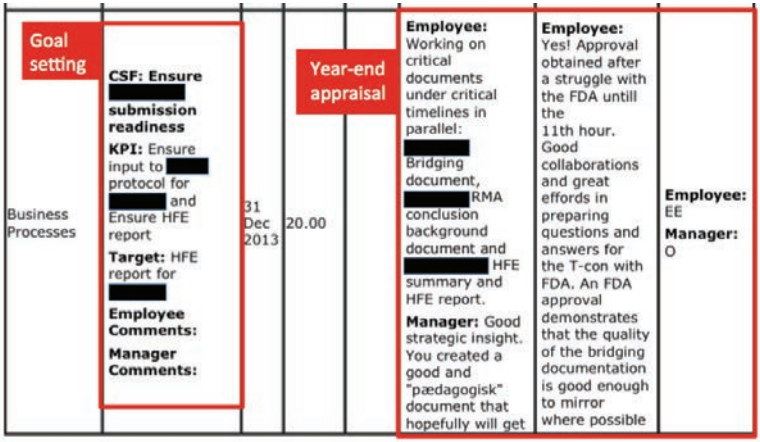

Figure 6. Snap shot of a scientist's PP form showing details about one specific business target.

In the example shown above, a snap shot from a scientist's PP form is provided. It presents one business target in detail as well as how this target was represented at the goal setting point (the beginning of the year) and, finally, how that specific target was appraised and rated by the manager at year-end. It also shows the impact this business target was considered to have on the final overall performance rating (20 per cent, as indicated in the third column).

7. Methodology

7.1. The Industrial PhD setup

My position as a PhD fellow at BioTech was made possible through the so-called Industrial PhD programme, which has been realized through the Danish Agency of Technology, Science and Innovation (DATSI). The Industrial PhD programme was introduced in 2002 and allows private organizations to employ PhD candidates insofar as the PhD application has been accepted by a recognized university or business school as well as by Innovation Fund Denmark's scientific board. During the three-year period that it generally takes to complete a PhD in Denmark, the company receives financial subsidies to complement the salary for the PhD candidate, which is individually negotiated. Moreover, Innovation Fund Denmark pays part of the university's expenses related to the PhD. (More details about the Industrial PhD programme can be found online, see Innovation Fund Denmark, 2015).

For an industrial PhD project to be accepted by Innovation Fund Denmark's scientific board, the project needs "industrial relevance" and, based on the employment specifications with the case organization, appropriate conditions for collecting and analysing empirical material relevant to both theory and practice. As defined by Innovation Fund Denmark, the PhD candidate needs to be present in the case organization for around 40 to 60 per cent of the employment period. The final thesis has to live up to the same rigorous academic standards as a traditional PhD, and one of the ideas with this setup, formulated by Innovation Fund Denmark, is that the industrial PhD candidate contribute to both theory and practice with her/his study. The industrial PhD enabled me to be employed at BioTech under the same conditions as regular full time employees (albeit on a time limited contract). In addition, each PhD candidate has an obligation to disseminate her/his nowledge to the case organization as well as to live up to the demands of the respective PhD school.

My employment with BioTech has included all the standard elements of what a regular position entails: I have had my desk at the so-called Global Performance (GP) department, which is a sub-department of the corporate HR division, and full access to the same electronic data as my colleagues. I have been equipped with my own company laptop, an internal e-mail account, a regular full-time employee access card, and so on. Of course, my affiliation with this department has had an impact on how this study has evolved. As mentioned, I have spent approximately every second day in the case organization, primarily at the GP department. I have not had any obligations to directly contribute to the department's deliveries; rather, my job has been to produce a PhD and to disseminate knowledge to the department along the way.

7.2. Aim of the method chapter

The purpose of this chapter is threefold: first, to present the empirical material that serves as the foundation for this thesis; second, to describe and discuss how I have assembled this material; and, third, to describe and discuss the way in which I have analysed and presented it. The overall study can be described as a longitudinal single-case study spanning three years (from May 2012 to May 2015). In my role as industrial PhD fellow, I have been employed to study the relationship between performance management (PM) and innovation by one of the sub-departments of the corporate HR division, the so-called Global Performance (GP) department, which has formal ownership of BioTech's global PM processes as well as the organization's global remuneration strategies and policies. To study the research questions delineated in the introduction, I make use of three main types of empirical material: interviews, observations and documents. The methods that I use can be described as qualitative as opposed to quantitative (Berg & Lune, 2012, p. 4). In the following, I provide an overview of the specific empirical material that has been used in the research, after which I account for some of the opportunities, challenges and choices I have been faced with in

regard to collecting and analysing the empirical material. First, however, I give a few remarks in terms of accounting for my methodological reflections.

7.3. Methodological considerations

The concept of "method" can be said to have a somewhat positivistic connotation in that it, based on its origins in ancient Greek, *méthodos*, refers to the pursuit of knowledge by following a path or an approach (Åsberg, Hummerdal, & Dekker, 2011). This connotation implies that knowledge is out there in a somewhat pure form. This does not echo my own ontological assumptions, but I still find it relevant and important to clarify how the empirical material has been generated and dealt with in the process of writing this thesis (Justesen, 2008, p. 80). Given my constructivist perspective, I define method as the activities researchers engage in so as to perform robust and reflexive research.

Accounting for my method is also about describing some of the decisions that I have made during my three-year journey as an industrial PhD fellow at BioTech. A full representation of these activities is not possible. Thus, I primarily focus on describing how specific theoretical texts and specific practical incidents have co-constituted my activities at BioTech, the gathering of the empirical material and the different treatments of it. While the previous chapters have specifically concentrated on describing how the *theory* affects my strategy of analysis, this chapter primarily focuses on clarifying what *practice* has meant for the realization and treatment of my empirical material. As this thesis is paper-based, which means that each of the papers must be able to "stand alone", some redundancy from this chapter and the method sections of the papers occurs. First, the empirical material is presented, after which I present some perspectives on my method, which touches upon how the material has been shaped by my method and how the writing up of the

empirical material matters for this study. Lastly, I comment on some methodological challenges related to the treatment of the three different types of empirical material.

7.4. The empirical material

The empirical material primarily comprises three main types of material: interviews, observations and documents. Although these activities and documents might very well have progressed (and been outlined) in the same way as if I had not been present in the organization, the activities, and the texts of the documents, of this material would not have looked the same, as I have been actively involved in selecting, analysing, and presenting the material. As Law (2004, p. 5) emphasizes, methods produce the empirical material that they seek to understand. By identifying and bringing together different pieces of empirical material, and by acting upon this material with theory and method, I actively produce specific realities. The following paragraphs describe some of the choices I have made while dealing with the different sources of empirical material.

7.4.1. Interviews

I have conducted 48 interviews in BioTech with 39 different people (conducted over two years and four months, from 6 June 2012 to 30 September 2014). Of the interviews, 35 have been with scientists, research managers and HR partners at different levels in BioTech's research organization, while 13 have been with HR consultants from the corporate HR division, typically the GP department where I have been employed throughout the period. Of these interviews, 43 have been digitally recorded, resulting in a combined running time of 46 hours and 11 minutes. A small handful of these interviews (four) were short interviews (between 13 and 28 minutes) with close colleagues from the GP department. The brief length of these conversations were due to their often fact-based nature, that is, I needed specific information, e.g. details about the PM/remuneration policies. The average duration of each of the in-depth interviews was approximately one hour (from 49 minutes to 1 hour and 23 minutes). Of the 48 interviews, 40 were identified as being more

relevant to the research question than the additional six, and all of these 40 interviews have been fully and professionally transcribed. Of the 40 transcripts, 38 have been transcribed into Danish (as spoken on the recording) and, when used in this thesis, translated by myself. The additional two transcripts were transcribed into English as they appeared on the recording. In total, the transcripts comprise more than 450,000 words, which amounts to about 1,300 pages (with approximately the same word count per page as this thesis). 15 of the interviews, all from the research organization (PRU), were conducted at the early stage of my research process, some of them in collaboration with an internal BioTech student. Due to their explorative nature (at that early point in time), I labelled these interviews "pilot study interviews" (conducted from 6 June to 29 June 2012). For these interviews, I developed an interview guide (Kvale, 1994, p. 133) that asked broad questions about how the scientists/research managers related to "innovation", "performance management", and "knowledge sharing" (please visit Appendix 1[5] to see the interview guide). These early interviews functioned as inspiration for the later planning of additional interviews, observations, as well as my theorizing on the subjects. All 39 interviewees across the 48 interviews were promised full anonymity, which I could sense mattered a lot to several of them. I interpreted this as being due to the rather personally-sensitive subject of the interview.

7.4.1.1. Selection of interviews

The selection of the pilot study interviews was relatively random. Given that I was interested in studying PM in very complex organizational settings, I used BioTech's online organizational charts to zoom in and out on different research departments from BioTech's largest research area, the Protein Research Unit (PRU), which, to me, sounded very "scientific". Granted, not a very

[5] The texts that have inspired this work the most were still new very new to me at the point of shaping the interview guide. Therefore, the outline of this early interview guide illustrates how great a philosophical journey this thesis has been. The wordings that I used in the guide indicate a set of different ontological assumptions compared to how I see the 'world' today (I was, for instance, interested in studying researchers' 'abilities', contextual 'factors', and other 'drivers' for 'innovation').

scientific approach; however, I was later assured that all of the identified departments worked within the very early stages of research, sometimes with research activities that were not even identified as actual projects yet. Most of the departments, however, worked with clearly defined research projects, typically in project matrix structures, meaning that the actual department (or "line") primarily had resources in the form of scientists who would be put into different projects across the lines, and these projects would then be led by project managers. One of the departments, the so-called Stem Cell Research (SCR) department, however, was different, and the second paper of this thesis focuses on it.

7.4.1.2. Interview method

The pilot interviews can be identified as semi-structured (Kvale, 1994), as they followed the abovementioned interview guide while simultaneously allowing the interviewees to take the conversations into new directions. The interview guide, however, structured the progress of the interview, which also limited the process of inquiry (Fontana & Frey, 2005). By contrast, the interviews that followed the pilot study can, to a greater extent, be characterized as explorative, as I often led the interviewees toward whatever they thought about concerning the subject of "the PP system", "performance management", "performance ratings", as well as these subjects in relation to their work activities. However, I used my theoretical framework as inspiration to develop these interview sessions *in vivo.* For instance, I was inspired by several principles of ANT: its principle of *symmetry* inspired me to be curious about how the interviewees interacted with not only humans, but non-humans as well; its interest in *relations* inspired me to ask the interviewees follow-up questions when they identified a relevant actor for their activities (i.e. whether this given actor took part in other relations/activities as well); and the CCO perspective's interest in *communicative events,* which inspired me to ask the interviewees for specific examples of *how* a given point or argument could be exemplified from any specific event that the interviewee knew about.

As noted by Czarniawska, I do not believe that an interview is a window into a social reality (Czarniawska, 2004, p. 49). Instead, I find that particular realities become represented or performed through interviews. This constructivist approach also helped me recognize how my own role, behaviours and presence would shape the interview. For instance, I recognized the importance of emphasising very clearly that the interviews were anonymous and that nothing would be reported to the interviewees' managers. I reasoned that this was especially important due to my affiliation with the corporate HR department, which was often involved in auditing programmes across BioTech. Without being able to document the need or effect of it, I also consciously reminded myself to avoid acting too formally, and to rather spend some time building up a more informal and jovial relationship with the interviewees.

With regard to anonymity, I decided to make the case organization anonymous early on in the research process to ensure that I would not be constrained in my engagement in the field in terms of merely focusing on what would later be considered acceptable for publication by the company. BioTech, however, has never uttered any requirements in this regard, so the censorship might in this way primarily serve the purpose of satisfying my own aspiration to write this thesis in a way that I find most scholarly relevant and appropriate.

7.4.1.3. Analysing the interviews

All 40 interview transcripts have been read through several times and uploaded to the data analytics software NVivo 10. Of the interviews, 26 have been openly coded in NVivo 10 for the purpose of analysing the content during the writing of the second paper of this thesis. Based on the iterative processes that characterized my movements between theory and the empirical material, however, I realized that the process of coding the content was not my preferred methodological approach. I

noticed that my codes needed to change along the way according to my developing analytical vocabulary. However, from that point in time, NVivo was nevertheless a valuable programme that helped me keep an overview of my empirical material. The screenshot below (Figure 7) shows how NVivo enabled me to get an overview of all the transcribed interviews, which have been sorted into different folders:

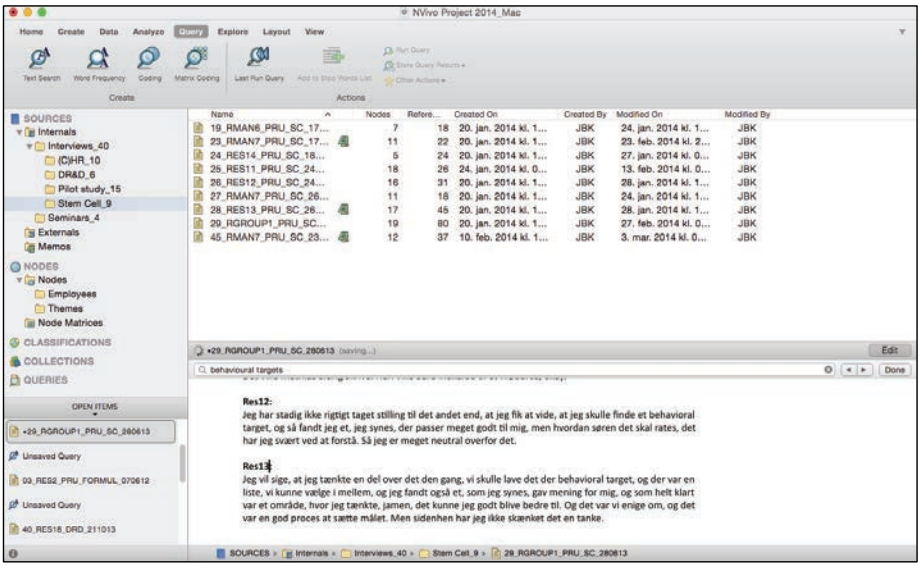

Figure 7. Screenshot from the user interface of NVivo showing how I organized my interviews.

On the left hand side, five different categories sort the interviews, and when a folder is opened, an overview of the interview transcripts appear in the upper main window. On the lower main window, the specific transcript is shown. I used the "text search" option of the software most frequently, as it allowed me to search for key words that I remembered, for instance, from a particular interview session. NVivo would then subsequently show the list of interviews in which the key word appeared. Some of the codes from the 24 transcripts, however, have also been useful after abandoning the idea of using open coding as a specific analytical approach. The codes with the

most “empirical” connotations, for instance, “behavioural targets” (which is coded as a “node” in NVivo), enabled me to get an overview of the number of times in a given interview this particular code had been given, based on my earlier coding of the transcribed sentences. The screen shot below (Figure 8) illustrates an overview of some of the nodes/themes that have been used for the coding of the material, as well as how NVivo gives one the opportunity to navigate through the material based on the codes of interest:

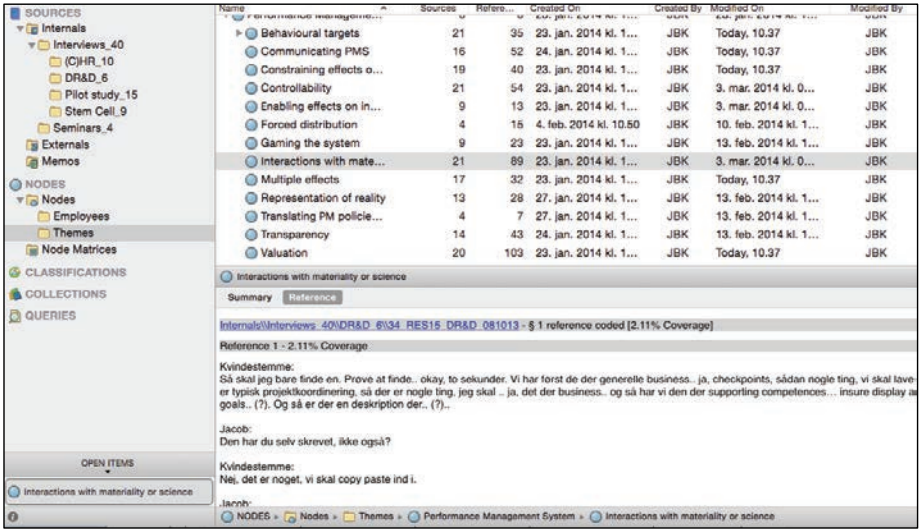

Figure 8. Screenshot from the user interface of NVivo showing how I created codes for different parts of the interview transcripts.

As shown in the upper main window, the overall coding category of “Performance Management” comprises 13 sub-categories that have been created through a process related to the method of “directed content analysis” (Hsieh & Shannon, 2005). “Interactions with materiality”, which has been highlighted to serve as an example above, was applied 89 times to 21 of the 24 coded interviews.

The organizing of the empirical material, as described in the paragraphs above, aided me in organizing my conversations with the empirical material. It facilitated my iterative movements between the empirical data and my attempts to position this thesis in a theoretically similar vein to the way Kuhn describes "conversations" between various "texts" (F. Cooren, 2006; Kuhn, 2008, p. 1233), as these labels were continuously kept "alive". In addition, I found it important to have a strategy that helped me "zoom out" from the comprehensive data set that I worked with along the way. As emphasised by Taylor, who draws on Nicollini's ideas about "zooming in" and "zooming out" (Nicollini, 2009), this is one of the greatest challenges for organizational communication researchers: to see the micro-level conversations in relevant contexts (Taylor, 2011b, p. 1285). The table below gives an overview of all the interviews that inform this study. The following list is organized based on when they were conducted:

Area of the organization and interview *Ref-tag*	**Employee position** (9 research managers, 18 scientists, and 12 HR consultants)	**Date of interview** (from June 2012 to September 2014)	**Length of recording/ transcribed**	**Interview number** If part of Pilot study = (P)
Protein Research Unit, sub-department 1, *ResMan1*	Research manager (manager)	07/06/12	1 hour and 4 minutes, transcribed	1 (P)
Protein Research Unit (PRU), sub-department 1, *Res1*	Scientist (Not manager)	07/06/12	1 hour and 2 minutes, transcribed	2 (P)
PRU, sub-department 1, *Res2*	Scientist (Not manager)	07/06/12	1 hour and 2 minutes, transcribed	3 (P)
PRU, sub-department 2, *Res3*	Scientist (Not manager)	15/06/12	50 minutes, transcribed, notes taken	4 (P)

PRU, sub-department 2, *ResMan2*	Research manager (manager)	15/06/12	1 hour, transcribed	5
Corporate HR, *CorpHR 1*	HR manager (manager)	16/05/12	N/A, not transcribed or recorded	6
Corporate HR, *CorpHR 2*	HR manager (manager)	18/05/12	1 hour and 1 minute, notes taken	7
PRU, sub-department 2, *ResMan3*	Research manager (manager)	20/06/12	58 minutes, transcribed	8
Corporate HR, *CorpHR 3*	HR consultant	27/05/12	N/A, not transcribed or recorded, notes taken	9 (P)
PRU, sub-department 2, *Res4*	Scientist (not manager)	20/06/12	52 minutes, transcribed	10 (P)
PRU, sub-department 2, *Res5*	Scientist (not manager)	20/06/12	36 minutes, transcribed	11 (P)
PRU, sub-department 3, *ResMan4*	Research manager (manager)	21/06/12	49 minutes, transcribed	12 (P)
PRU, sub-department 3, *Res6*	Scientist (not manager)	21/06/12	52 minutes, transcribed	13 (P)
PRU, sub-department 3, *Res7*	Scientist (not manager)	21/06/12	49 minutes, transcribed	14 (P)
PRU, sub-department 4, *Res8*	Scientist (not manager)	21/06/12	41 minutes, transcribed	15 (P)
PRU, sub-department 4, *ResMan5*	Research manager (manager)	29/06/12	51 minutes, transcribed	16 (P)
PRU, sub-department 4, *Res9*	Scientist (not manager)	29/06/12	51 minutes, transcribed	17 (P)
PRU, sub-department 4, *Res10*	Scientist (not manager)	29/06/12	56 minutes, transcribed	18 (P)
PRU, *PRU HR Partner 1*	HR Partner	08/01/13	57 minutes, transcribed	19
PRU, sub-department 5 (SCR dept.), *ResMan6*	Research manager (manager)	17/01/13	44 minutes, transcribed	20
Corporate HR,	HR Manager	06/02/13	59 minutes, transcribed	21

CorpHR 4				
Protein Research *PRU HR Partner 3*	HR Partner	11/02/13	57 minutes, transcribed	22
PRU, sub-department 5 (SCR dept.), *ResMan7*	Research manager (manager)	17/06/13	49 minutes, transcribed	23
PRU, sub-department 5 (SCR dept.), *Res14*	Scientist (not manager)	18/06/13	46 minutes, transcribed	24
Protein Research Unit, sub-department 5 (SCR department), *Res11*	Scientist (not manager)	24/06/13	42 minutes, transcribed	25
Protein Research Unit, sub-department 5 (SCR department), *Res12*	Scientist (not manager)	24/06/13	53 minutes, transcribed	26
Protein Research Unit, sub-department 5 (SCR department), *Res13*	Scientist (not manager)	26/06/13	1 hour and 13 minutes, transcribed	27
Protein Research Unit, sub-department 5 (SCR dept.), *ResMan7*	Research manager (manager)	26/06/13	46 minutes, transcribed	28
PRU, sub-department 5 (SCR dept.), *Group int.*	Group interview with three scientists; Res11-13	28/06/13	1 hour and 23 minutes, transcribed	29
Corporate HR, *CorpHR 7*	HR consultant	01/08/13	43 minutes, transcribed	30
Corporate HR, *CorpHR 3*	HR consultant	20/08/13	1 hour 23 minutes, transcribed	31
Corporate HR, *CorpHR 5*	HR consultant	17/08/13	24 minutes, transcribed	32
Corporate HR, *CorpHR 6*	HR consultant	27/08/13	39 minutes, transcribed	33
Instrumental Research & Development Unit (IRDU), *Res15*	Scientist (not manager)	08/10/13	56 minutes, transcribed	34
IRDU,	Scientist (not	08/10/13	46 minutes, transcribed	35

Res16	manager)			
IRDU, *ResMan8*	Research manager (manager)	08/10/13	47 minutes, transcribed	36
Corporate HR, *CorpHR 9*	HR consultant	10/10/13	20 minutes, transcribed	37
IRDU, *ResMan9*	Research manager (manager)	11/10/13	50 minutes, transcribed	38
IRDU, Res17	Scientist (not manager)	21/10/13	40 minutes, transcribed	39
IRDU, *Res18*	Scientist (not manager)	21/10/13	28 minutes, transcribed	40
Corporate HR, *CorpHR 7*	HR consultant	04/11/13	13 minutes, transcribed	41
Corporate HR, *CorpHR 10*	HR consultant	07/11/13	40 minutes, transcribed	42
Corporate HR, *Corp. HR Group int.*	Group interview with HR consultants	08/11/13	53 minutes, transcribed	43
PRU, *PRU HR Partner 2*	HR Partner	29/01/14	45 minutes, transcribed	44
PRU, sub-department 5 (SCR dept.), *ResMan7*	Research manager (manager)	30/01/14	48 minutes, transcribed	45
Corporate HR, Group int. 2	Group interview with HR consultants	07/02/14	28 minutes, transcribed	46
PRU, *PRU HR Partner 1*	HR Partner	14/07/14	N/A, notes taken	47
PRU, *PRU HR Partner 4*	HR Partner	30/09/14	N/A, notes taken	48

Table 1. An overview of the qualitative interviews that form a major part of the empirical material used in this thesis.

7.4.2. Observations and documents

In addition to NVivo, Microsoft Excel also assisted me in keeping track of the empirical material along the way. This not only concerned the overview of the interviews, but also my observations in the company, relevant documents, ideas of whom to contact next, and so on. The screen shot below

(Figure 9) shows an anonymised version of my Excel work file, which was updated every time I recorded, participated in or planned for an empirical event:

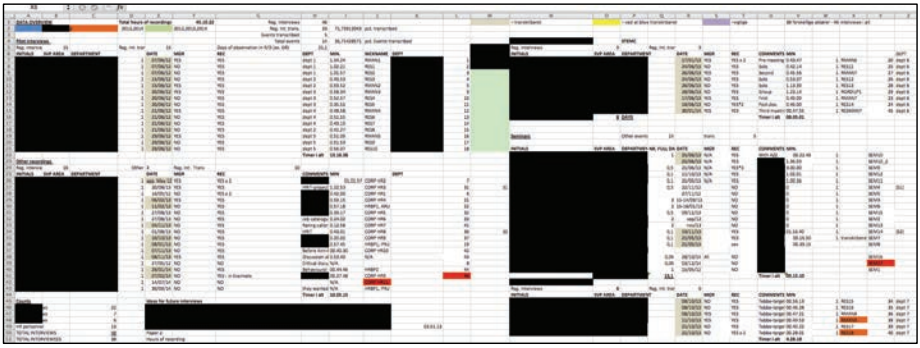

Figure 9. A screen shot of my Excel file, which has served as a tool to provide an overview of my empirical data.

In addition to the use of interviews, this thesis has also been written on the basis of numerous empirical observations from the field and has been informed by documents from the case organization. Despite being employed by the GP department and being present at my office there approximately every second day, I have not taken notes or recorded the events in which I participated at the GP department.

My presence in the GP department has definitely shaped the analyses of this thesis, and provided valuable data access to a number of sources, which are introduced later (e.g. individual PP forms); nevertheless, the basic premise of my research has been to study PM in the context of BioTech's research organization. This means that the objects of study were not the employees of the GP department in particular, but rather the events that unfolded in the research organization, in PRU and IRDU, that were relevant for the subjects of PM and innovation. So although I participated in almost all GP department meetings over my three-year employment period (around 25 meetings)

and I was situated in this department, I do not consider the empirical *observations* made at GP part of my "core" empirical material. Instead, my affiliation with the GP department offered me highly valuable insights and access to the ways in which the PM was conceptualized and developed from a corporate perspective. Likewise, it gave me access to important and relevant empirical material, such as individuals' PP forms. This means that I gathered tangible empirical material that has given me insights into what actual individual goals look like, as well as what business targets and behavioural targets look like. In 2012, I gained access to a total of 51 individual PP forms[6] of scientists and research managers from different research sub-departments. In addition, I collected 21 PP forms from 2013 and 2014 (some are from the same individuals).[7] Having this tangible PM data has given me the possibility to compare what is said in interviews and done in empirical events with what is inscribed into the PM system.

As a result of my employment at BioTech, I was able to move around quite freely in the organization; nevertheless, corporate HR, specifically the GP department, remained "my base". The table below provides an overview of the empirical observations that I have conducted in the research organization as well as a few significant empirical events from corporate HR that have informed my studies:

Area of the organization and *ref*-tag	**Type of event (and participants)**	**Date of event / recording status**
Corporate HR Event 1, *CorpHR E1*	Corporate HR seminar on the subjects of PM and mobility (around 80 participants, 1 full day)	15/05 2012, field notes taken, not recorded
Corporate HR Event 2, *CorpHR E2*	Mandatory programme for all new line managers in BioTech (around 60 participants, three full	11-14/09 2012, field notes taken, not recorded

[6] I of course followed the GP department's procedure for obtaining this data, with this first data pull being approved by my first company supervisor.

[7] All individuals approved this data pull.

	days)	
Corporate HR Event 3, *Corp HR E3*	Global Performance conference on global remuneration and PM principles (around 20 participants, 2 full days)	12-13/11 2012, field notes taken, not recorded
PRU Event 1, *E1 PRU* (Particularly drawn upon in the first paper)	Mandatory leadership seminar for research managers (around 70 participants, 4 hours)	22/11 2012, field notes taken, not recorded
PRU Event 1.1, *E1.1. PRU*	Mandatory leadership seminar for team leaders (around 50 participants, 1 hour)	27/11 2012, field notes taken, not recorded
PRU Event 3, *E3 PRU*	PRU Academy, leadership development seminar (around 30 participants, research managers, 2 full days)	15-16/01 2013, field notes taken, not recorded
PRU Event 4, *E4 PRU*	PRU leadership seminar, focus on feedback culture, (1 full day)	21/05 2013, recorded and transcribed
PRU Event 5, *E5 PRU*	PRU leadership seminar, focus on feedback and knowledge sharing, (1 full day)	25/06 2013, recorded and transcribed
Corporate HR Event 4, *CorpHR E4*	HR seminar on HRIT-possibilities (0,1 full days)	25/09 2013, field notes taken, not recorded
Corporate HR Event 5, *CorpHR E5*	Global Performance conference on global remuneration and PM principles (around 20 participants, 1 full day)	01/11 2013, field notes taken, not recorded
PRU, Event 2, *E2 PRU* (Particularly drawn upon in the first paper)	Mandatory leadership seminar for research managers (around 70 participants, 1 hour)	19/11 2013, field notes taken, not recorded
PRU Event 6, *E6 PRU*	PRU leadership seminar, focus on setting PM targets (0,5 full day)	09/12 2013, field notes taken, not recorded
PRU Event 7, *E7 PRU*	PRU leadership seminar, my input to the PRU management team on PM findings (0,1 full day)	28/10 2014, field notes taken, not recorded
PRU Event 8, *E8 PRU*	PRU HR Business Partner seminar, including my input on PM findings (0,1 full day)	03/12 2014, field notes taken, not recorded

Table 2. An overview of empirical events/observations at BioTech (from May 2012 to December 2014).

In sum, the seminars (and observations) listed above comprise about 13 full days of observations. This number, however, does not represent my fieldwork in the organization, but rather indicates the number of days on which I attended scheduled programmes. Another important part of my empirical fieldwork was conducted in PRU's sub-department 5, the so-called Stem Cell Research (SCR) department. There, I followed the work of four senior scientists for one full workday each (Res11, Res12, Res13, and Res14), in the laboratory, at meetings and at lunch, as well as two workdays with their manager (ResMan7).

7.4.3. Making the empirical material meaningful

As noted earlier when referring to Law (2004), my methodological choices and actions have been central for how the empirical material appears in this thesis. If we first focus on *the event,* it is relevant to mention Czarniawska's (2008, p. 33) assertion that events must be *made* meaningful. What might initially seem irrelevant could very well end up becoming emphasized as the most empirically relevant. This process requires active involvement: "The production of meaning is always retroactive […]. We can see present events as meaningful only when they become the past, although their meaning may be continuously changing" (ibid.). During my three-year study period at BioTech, I have had many different ideas for papers. For instance, I could have focused more intensely on one of the local policies in PRU with regard to how there is a policy for forcing a certain distribution of performance ratings over the population, which seems to have many downsides. Likewise, I could have studied the occurrence of a related effect on the distribution of PM ratings given that large parts of BioTech operate with fixed pools of money for paying out short-term incentives, as well as guided percentages for pay out depending on individual performance ratings. This means that a specific, and fixed, annual sum of money determines the limits within which first-line managers are able to appraise their employees if they want to follow the set guidelines. Again, another idea that I did not pursue was how a certain discourse, produced

by the scientists, seemed to enable them to accept and cope with the fact that they did not always have a chance to control their own performances, as they work with living materials. That being said, however, each of the three papers included in this thesis presents a narrative that I find representative of my experiences within the company. The particular crafting of each paper has been realized through a stream of events that have organized, challenged, disrupted and inspired my thoughts based on my conversations with colleagues at CBS and colleagues at BioTech, as well as on my readings of different literatures. As indicated here, I look at my three years of studying PM at BioTech as an ongoing process consisting of fragmented activities and events that I have ended up organizing and presenting. Again, I find Czarniawska's (2008) description of how scholars narrate the organization of their research descriptive for my process and method:

> The everyday organizing consists of fragmented activities and events, apparently disjointed actions and conversations that seem to have no particular meaning. But it is just this hodgepodge of events, actions and talks that is the material for the later narratives, for stories that host heroes and villains, dramatic events and daring actions, full of significance for the storyteller if not always for the listener or the reader. (Czarniawska, 2008, p. 33)

Scholars play a central role in the organizing and presenting of their research, and I find it important to emphasize that I do not believe that any *particular* meaning resides within such events. I will now briefly describe how certain analytical key points have worked as criteria for how to identify, and further develop, the empirical material.

7.4.4. The making of the cases

Some of the elements that I have used to identify possible cases, and to further develop them if identified as relevant in the first place, can be understood as criteria for my casework. In order to ensure that the cases built upon a broad scope of data, the three articles include empirical material

from 1) several events (multi-sited observations), 2) many actors (so that several voices are heard), and that the cases represent 3) several types of relations (i.e. both relations between human and non-human actors). While I do not think that these guidelines alone have guaranteed thorough, relevant and interesting research, I do think they have been helpful. The next section elaborates on why the process of writing up the material deserves mention in this method chapter.

7.4.5. Writing the field

Just as interviews, events and observations can be regarded as empirical material, so too can the researcher's presentation of this material be understood as a material that seeks to make points, arguments and perspectives out of the "building blocks" of the empirical material. This can be done in numerous ways, and the writer of this research takes a central role in defining how the empirical material gets presented. To exemplify how the presentation of this material matters for this particular study, I find Chua and Baxter's descriptions about the "author-writer" relevant (Chua & Baxter, 2008, p. 101). They contest the modern division between "truth" and "aesthetics" (p. 112) and draw upon Law (2004, p. 84) to identify how well-written, trustworthy, critical and aesthetic field research needs to sustain some degree of empirical "messiness" and argue that such messiness addresses multiplicities rather than singularities. While writing up my papers – two of them in collaboration with colleagues – I have been inspired by these ideas. Not that I have actively sought to write things messily, but rather to accept, while describing the field and the identified actions, that there could be multiple reasons, explanations and consequences related to the specific descriptions. This recognition allowed me to unfold empirical narratives that could often be characterized as relatively subjective (i.e. with regard to how particular communicative events were described) rather than formalistic and objective. Each paper studies, asks and contributes to its domain literature through the creation of alternative narratives about 1) how we can understand enabling and coercive aspects of PM, 2) how we can understand the role of control and work

objects in science, and 3) how we can understand the different local effects related to specific framings of a new global PM behavioural measure. These contributions have been made based on empirical messiness, and the reason I emphasize this here is that it has required fair amounts of patience, acceptance, and a lack of control to allow this messy empirical material to form during the three years that I have been employed by BioTech. That being said, I think it would be misleading to describe the realization of the empirical material as being out of control. In line with the "control devices" of my empirical material, which I have already presented (NVivo and Excel sheets), the processes of structuring, assembling and thinking through the development of each of the papers were also formed through other self-made documents that helped me navigate all of the data. For Paper 1, for instance, I tested my idea for readjusting its empirical narrative based on the comments that I had received from critical perspectives on accounting, which stressed that I needed to incorporate a broader of data in the paper. In order to get an overview of the data that I had at that time, which could potentially be used to satisfy this need, I made the PowerPoint slide below (Figure 10), which supported the re-writing of the article.

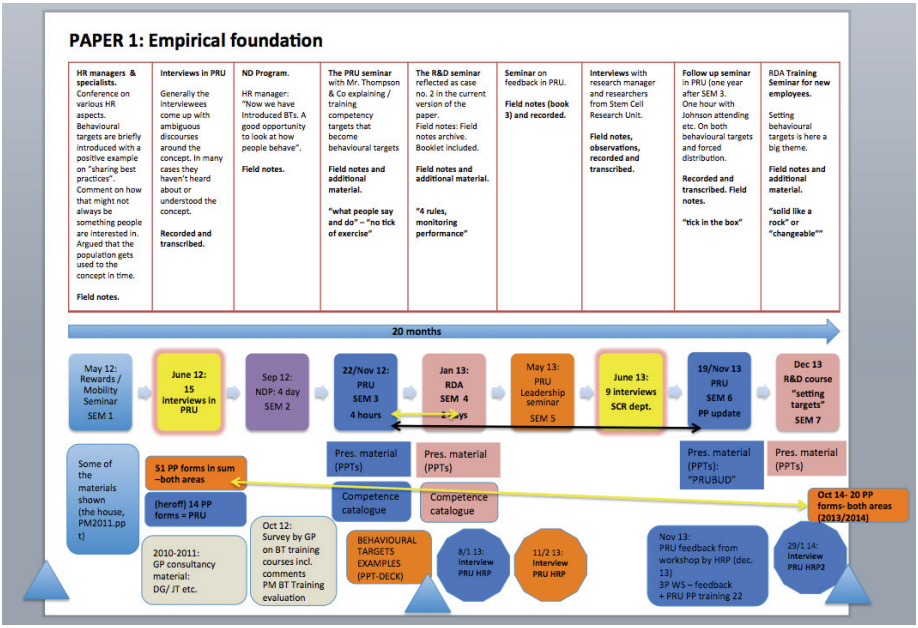

Figure 10. Snap shot of one of my PowerPoint slides used as a working document, which helped me get an overview and organize the empirical material of the first paper.

7.4.6. Problematizing the writing of the field

Baxter and Chua (2008) argue that good qualitative field research in management accounting needs to recognize the importance of "the aesthetic". And, in order to produce "well-written" field studies, the authors argue that scholars need to consider how their work can be presented in ways that allow the reader to "reassemble" the social through the reading of the research (Latour, 2005, p. 124). I find it important to note that during my studies and during the continuous shaping of my empirical material, as well as through my representation of it in the three papers, I have not merely represented empirical messiness, but also constructed empirical narratives that have depended on my choices, thoughts, inspiration, dialogue with peers, and so on.

Along the way, I have kept in mind two keywords that originate from Baxter and Chua's writings about what makes field studies convincing: "authenticity" and "criticality" (2008, p. 104). *Authenticity*, according to the authors, requires some kind of "been there" quality (cf. Geertz, 1988) constructed through how the researcher provides assurance for having been present in the field. Due to my close affiliation with, and presence in, BioTech, this has not been difficult. I have, so to speak, been immersed in empirical material. From the start of the research, I have found it important to produce empirical accounts that were "thick" enough (Geertz, 1973) to make the articles recognizable and understandable for the actors that have helped me produce the material. In addition, a focus on *criticality* has helped me question whether and how a given local account would be interesting to pursue and study further and, hence, help me ask whether our accounts of the field speak to "human" and "organizational conditions" in useful ways (Baxter & Chua, 2008 referring to Clegg, 2006, p. 861). This also relates to the notion of zooming in and out in iterative movements between theory and empirical material.

7.5. Making analytical discomfort productive

Sometimes my interviewees would say, "PM doesn't matter at all for me", which, to begin with, would disturb me: Did that mean that my study was of no value at all? Along the way, however, I learned to challenge such situations in a more productive way. Ekman's (2014) descriptions of "analytical discomfort" (p. 145) resonates with the practical sensing of empirical disappointment that one can use as an "empirical guideline" (ibid.) to pursue and study further the details and circumstances that are met. This, I believe, has helped me produce more relevant and interesting papers. Ekman describes how she worked with such analytical discomfort in productive ways, and how she used such experiences to challenge her analytical hypotheses, thus adding complexity to the analysis:

> Whenever I experienced discomfort or reluctance, I considered this an indication to pursue it. As an empirical researcher, I often feel discomfort when my analytical ordering is threatened. It could be that certain employees insist on their commitment to traditional craft, just when I have painstakingly concluded that craft is no longer a value in the network organization. These employees generate analytical discomfort, and one is often tempted to label them as 'exceptions'. If one elects, instead, to turn these disturbances into a central focus for a while, they usually add important complexity to the analysis. (Ekman, 2014, p. 145)

For me, the complexity of my empirical material, which was often self-contradictory, helped me become engaged with *describing* events as I had experienced them, instead of *concluding* what they meant. Often these descriptions turned out to be useful at a later point in time when they could be related to other descriptions. As Czarniawska (2004) notes, they were made important in retrospect: They were made important through reflections shaped by elements that were already-written theories, and already-done activities in the field, which sometimes highlighted their seeming relevance, hence my writing about these events. Czarniawska writes: "Nobody is aware that an important event is happening when it takes place, although in most cases people are aware of the time of day and the day of the month. Events must be made important or unimportant" (Czarniawska, 2004, p. 776). Some empirical events, however, appeared to me as being important *in* the actual given moments. In the first article, this is, for instance, represented by description of the participants at a management seminar making objections to the HR and external consultants when arguments for the concept of behavioural targets were first articulated. In the second article, another important event is represented by our being informed that a ventilation system had interfered with the process of innovation for several months. In the third paper, such important events are primarily represented by interviews during which employees explained that behavioural targets made them reflect upon their own behaviours in new ways. In these many

events, I did not need to *make* events important in any other way than to describe them. Here, theory became a secondary concern, and I found it stimulating and meaningful to organize the writing of the papers around these events.

7.6. Event-driven methodology

The writing of the papers became event-driven while the theory had the purpose of helping me, and my co-authors, to present, unfold and problematize the empirical material in specific and relevant ways. In other words, events got to work as plot points for the analyses of the three papers as well as drivers for the writing up of the empirical material. Some characteristics are shared by these events. There was an element of *controversy* in each of them and this served as a methodological guideline for my empirical presence at BioTech from the beginning. The following paragraphs unfold some relevant dimensions related to controversy.

All three papers present controversial subjects in the organization in different ways. As mentioned in the introduction, looking for controversies also characterizes my general methodological approach to the empirical material. This also relates to my interest in describing PM "in the making", as controversies make relevant actors, arguments and dilemmas more visible (Latour, 1987). In addition, the *relations* between these actors, arguments and constructed dilemmas also become more visible through controversy (Callon, Lascoumes, & Barthe, 2001; Fraser, 2007; Latour, 2001; Marres, 2012). As described by Latour, we study "science in action" to either arrive before facts are made or to follow controversies that "reopen" these facts that have been blackboxed (Latour, 1987, p. 258). It is much easier to study a phenomenon when it is being questioned (Czarniawska, 2008, p. 25). When processes run smoothly, it is much harder to describe what enables them to do so, who is involved in the processes, and what matters to the actors that are involved. However, in processes "in the making", facts are often contested, shaped and made. Through controversies, facts become problematized into matters of concern (Latour, 1987). Hence,

my methodological approach can also be described as a "matter of concern approach" (Ekman, 2009, p. 74). So how do I define controversy? The interviews and my observations have been the most important types of empirical material in informing me about organizational controversy. Moreover, based on my ambitions to study my research question with a symmetrical approach to action, I have worked on trying to allow objects, or materiality, to work as indicators for controversy as well. For instance, my initial persistent interest in the empirical phenomenon of PM has led me to "follow the actor" of the PP system in BioTech (Latour, 1987). By following the making of one of its significant, essential components – the object of behavioural targets – I observed this empirical object transform into an issue (cf. Paper 1 and Paper 3). Likewise, the presence of business targets and milestones became issues in stem cell research (cf. Paper 2).

7.7. My role at BioTech

Throughout the process of doing the research, my research endeavours have felt legitimate. A standard part of the work being done by the GP consultants is to develop new strategies and evaluate local practices. From this perspective, it felt natural that I studied "the scientists" in the research areas and not the particular actions of the GP consultants. Not so obvious was trying to identify what role I played in the organization, i.e. to what degree I should come up with recommendations for strategic development processes in the department, participate in conversations about the subjects of PM and remuneration, and so on. However, after some time I realized that affecting and shaping the relations around me was unavoidable. In the first couple of months, I recall doing much to avoid commenting on the discussions that played out at the GP department meetings, as I did not want to affect the actions and conversations that took place. This role, however, quickly became frustrating, and I reasoned (not surprisingly, based on my ontological assumptions) that my presence would affect the processes of organizing regardless of how little I said. Therefore, I concluded that I could just as well become a more engaged (and for

me “natural”) player in my daily activities. This meant that, from an early stage, I started to become more engaged with the department. Instead of trying to eliminate reactivity, I instead tried to be reflexive about it (Espeland & Sauder, 2007). For instance, for a long period of time, I wrote monthly newsletters about theoretical perspectives on PM for the department and gave my input on strategic development processes regarding specific challenges associated with PM.

I spoke in two different languages so to speak: one in the context of CBS and one in the context of BioTech. Not even in my theoretical presentations and newsletters for the department did I use the same language as at CBS. I realized that this was due to my (true) theoretical framework (in the PhD) and being identified as descriptive at CBS, while the language in the GP department was normative. In the GP department, the purpose was to improve existing practices, not to describe them. However, I was open about the ways my research perspectives differentiated from their business perspectives and immediate needs. I did not try to teach the team ANT/CCO or practice-based management accounting scholarship. Answers were more appreciated than questions: conclusions, results and directions were in higher demand than theory-based descriptions. The following example illustrates how working at GP and at CBS simultaneously represented two ontologically different realities. At one point, I decided to circulate an article (Ferreira & Otley, 2009) that reviewed the literature of PM systems. In the subject line of the e-mail, I informed the team that this was a rather “holistic” review of the literature on the subject. A few minutes later, the GP team and I received a joking, if rather telling, e-mail from one of the consultants, saying only: “Whenever I hear the word holistic I reach for my guns”. This says something about how the consultant had a more positivist understanding of the world than I had. This characteristic applied to several other instances in the department where it was obvious that numbers were regarded as more solid evidence than qualitative reflections or statements. Therefore, I tried to combine my

qualitative approach with more tangible advice, for instance, through my monthly newsletters in which I often elaborated on theoretical perspectives that somewhat diverged from the literature that this thesis contributes to (for instance, I applied my thoughts to subjects such as motivation, enabling PM systems, and some general thoughts about "behavioural targets").

I enjoyed my time in the GP department very much, particularly the company of my colleagues as well as the stimulating insights into how a corporate HR function works with developing global PM and remuneration strategies. I feel that I have learned a lot, and that what I have learned has helped me recognize the importance of balancing my sometimes fluid descriptions of – and sometimes theoretically convoluted approaches to – the empirical material with a more practice-oriented and tangible approach to the challenges that real people face in their everyday lives. Overall, I believe that my work as an industrial PhD fellow, as well as an employee of the GP department, has enabled me to better describe matters that are of consequence for organizations that develop and implement PM systems and practices. The next chapter illustrates the outcome of these analytical ambitions. The first article offers a case where the concept of behavioural targets is being formally presented for a group of research managers for the first time. The second article narrates on a case of how BioTech's PP system interacts with processes of innovation in the research area. Lastly, the third article demonstrates how different local framings of behavioural targets produce different local effects.

8. Analysis

8.1. Paper 1

Struggling to create enabling measures in a pharmaceutical company
Talk, texts and artefacts in the constitution of performance management measures

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Abstract

This article presents a longitudinal study from a global pharmaceutical company engaged in developing a new performance management (PM) measure called "behavioural targets". This study contributes to the management accounting literature focused on developing "enabling" PM systems by highlighting *how* performance measures are shaped in and between communicative events, and how the interplay between the communicative elements of artefacts, texts, and talk constitute these events. This generates at least three findings that contribute to theory and practice. First, it shows how PM systems that are presented as "enabling" in a given communicative event might very well appear to be "coercive" in another event, despite its formal design features remaining the same. Such a development depends upon how the communicative elements of the first event came to interact with other communicative events. Second, this perspective dissolves dominant dichotomies of whether a PM system is enabling or coercive, as it shows how such qualities depend on the system's communicative relations where artefacts, texts, and talk play important roles. Third, this study also functions as a supplement to traditional "stage thinking", related to how scholars and practitioners differentiate between relevant forms of interventions in PM development depending on whether the system is being designed, implemented or used. In sum, this paper argues that the way

in which artefacts, texts, and talk constitute PM systems in and between communicative events requires further studying.

Keywords:

Performance management; Performance-measurement; Enabling; Coercive; Artefact; Talk; Communicative Constitution of Organizations (CCO)

1.0. Presenting a new type of performance measure

November 22nd, 2012, Auditorium A, Event 1

Protein Research Unit (PRU), BioTech

> As managers here in the protein research unit [PRU], you're engaged with performance every day. The aim of meeting up today is to make people better with the help of [behavioural][8] targets (Senior Vice President, PRU, 2012).

These were the opening words of the Senior Vice President at the first event on presenting the new performance management (PM) measure, behavioural targets, to his audience of approximately 70 research managers in the largest research unit, PRU, of BioTech[9], a global pharmaceutical company. He subsequently passed the floor to an external consultant who was leading the management seminar along with a local HR partner. After arguing that behavioural targets had the potential to enable engagement and knowledge sharing in the organization, the consultant defined behavioural targets as follows: 'It's about what people say and do, and [about] how to observe this.'

[8] The actual wording used was "competency targets", but this was changed to "behavioural targets" at the end of the seminar. As this paper does not specifically address this lexical change, the performance measure "behavioural targets" will be used for the sake of clarity.

[9] A pseudonym.

However, the consultant strongly emphasized the importance of not using this new measure in mechanistic and unreflective ways: '[T]he big *don't do* is that this becomes "check-the-box targets" ' (Consultant, PRU E1, 2012).

2.0. Theoretical and practical relevance

For the past couple of decades, research on performance management (PM) systems has grown dramatically, while practitioners in the field have also been more and more innovative in developing new systems to manage and measure performance (Power, 2004, p. 776). Subsequently, this development has increased the complexity of PM systems (Fauré & Rouleau, 2011, p. 167) while the notion of PM systems as essential components of rational and efficient corporate functioning remaining undisputed in most large-scale organizations (Dambrin & Robson, 2011, p. 428). Influential literature has argued that user involvement and user participation in the processes of developing and implementing PM systems are highly important for making those systems "enabling" rather than "coercive" (Adler & Borys, 1996; Wouters & Rojimans, 2011; Wouters & Wilderom, 2008). For instance, this literature has studied the importance of careful system design and implementation. The present study contributes to this literature by challenging the relevance of prescribing enabling or coercive effects to systems that are designed or implemented in specific ways.

This paper studies the communicative constitution of a new PM measure in a global pharmaceutical company, BioTech. Much effort has been used in the organization to make a new type of performance measure "enabling" (Adler & Borys, 1996). Based on longitudinal fieldwork, this paper shows how interactions between communicative events constitute these new measures, presented here as "behavioural targets". By drawing on the so-called communication as constitutive of organization (CCO) perspective (Ashcraft et al., 2009; F. Cooren et al., 2011; F. Cooren, 2004;

Taylor, 2011b), this study contributes to research in management accounting that is focused on the development of "enabling" PM systems (Jordan & Messner, 2012; Wouters & Rojimans, 2011; Wouters & Wilderom, 2008). This study argues that the qualities of these systems cannot necessarily be controlled through careful system or process design. As shown with this case, relatively mundane communicative elements, such as PPT presentations and speech, might end up constituting PM systems in other ways than intended. This challenges the conventional ways of identifying PM systems as either enabling or coercive.

Longitudinally, the case study revolves around how consultants and human resources (HR) personnel in BioTech introduced a new PM measure called behavioural targets to the company's largest research areas. The declared purpose of introducing behavioural targets was to optimize individual employee performance by making employees accountable for achieving not only their business targets, which represent results, but also for meeting targets that constitute relevant behaviours that lead to these results. The organization's aim was to balance the "how" (employees' results) with the "what" (employees' behaviours). The first section discusses the literature on the enabling and coercive effects of management technologies, after which the second section discusses some of the studies within management accounting that have examined the roles of materiality in constituting accountability (Ezzamel & Hoskin, 2002; McLean & Hoskin, 1998; Quattrone, 2004, 2009a). The third section looks at how the CCO perspective comprises a theoretical framework, which is useful for the purpose of this study. Subsequently, the case and its methodology are introduced, and then the analysis is unfolded. Lastly, the findings are discussed, after which this paper is concluded.

3.0. Enabling and coercive aspects of PM development

Adler and Borys (1996) coined the concepts "enabling" and "coercive" bureaucracies. According to their framework, enabling procedures encourage participation, trust, and motivation, while coercive

procedures constrain and punish, instead of supporting productive practices. More specifically, Adler and Borys (1996) define enabling bureaucracies as having a set of features characterized by local transparency, global transparency, flexibility, and repair. These characteristics refer to how much access the users of a given system have to information about how the system is designed; how the system relates to other systems and policies; how well the system can be adjusted to fit the users' workflows; how well users are able to correct potential flaws in the system while they perform their tasks; and how well the system mobilizes the users' "capabilities", "skills", and "intelligence" (1996, p. 68ff). By contrast, the authors define coercive bureaucracies as being difficult to change, mechanistic, alienating and as granting their users a minimal degree of involvement (Adler & Borys, 1996, p. 84).

Adler and Borys's (1996) framework has inspired management accounting research in many ways. Ahrens and Chapman (2004) were the first to adopt the framework of enabling and coercive effects of PM systems. They showed how a group of restaurant managers was enabled by their management control systems to shape innovation. Since then, several researchers have studied enabling and coercive effects of PM systems in various empirical settings (Chapman & Kihn, 2009; Free, 2007; Jordan & Messner, 2012), while other studies have focused on how specific strategies for involving the users in the development of PM systems impact on the chances of developing systems that are enabling (Groen, Wouters, & Wilderom, 2012; Wouters & Rojimans, 2011; Wouters & Wilderom, 2008). None of these studies, however, have adopted a communication perspective to describe their empirical cases. With few exceptions (Jordan & Messner, 2012), these studies assume that enabling and coercive effects depend on the system features of management accounting systems (Adler & Borys, 1996; Ahrens & Chapman, 2007; Free, 2007) or on how well the end users of the systems are involved in the process of developing the systems (Groen et al., 2012; Wouters & Rojimans, 2011; Wouters & Wilderom, 2008). While this is not a complete

review of the comprehensive stream of research mentioned above, the following paragraphs merely represent some of the many arguments from these papers that are considered most relevant for this paper.

Wouters and Wilderom (2008) claim that the 'design and implementation activities of [PM systems] are conducted in a mutually constitutive, iterative fashion' (p. 409). Initially, this resonates well with the communicative theoretical framework promoted in this paper. However, the authors never describe the actual activities that have these mutually constitutive effects. Instead, the authors suggest that organizations should focus on involving employees in the processes of developing PM systems by building on the users' 'existing skills, practices, and know-how' (Wouters & Wilderom, 2008, p. 511), because such 'experience-based development process[es]' would strengthen 'the enabling nature' of PM systems (ibid., p. 493). By further developing Wouters and Wilderom's (2008) focus on employee participation, Wouters and Rojimans (2011) take up the challenge of studying conditions for "knowledge integration" through the use of prototypes in PM development based on a longitudinal case study of a logistics department. The authors find that "experimentation", "joint ownership", and "user reporting" enhance the effectiveness of "knowledge integration antecedents", which they associate to enabling PM systems (ibid., p. 714). In addition, the authors argue that giving users the possibility to participate in the development process of a new accounting technology would also allow the organization to "utilize" these users' "relevant tacit knowledge". Both studies echo Adler and Borys's (1996) somewhat essentialist descriptions of how enabling bureaucracies are capable of mobilizing the "skills" and "intelligence" of the users; employees and managers' skills are presumed to exist within these individuals, and these skills can be exploited if conditions are right. By contrast, this paper argues that enabling or coercive aspects of PM cannot be predicted by formal system design features or rules that set criteria for user involvement in the processes of developing the systems. This study shows how

performance measures are constituted over time, in and through communicative events, and hence challenges the dominant understanding of what makes PM enabling or coercive. To study the empirical case, I combine theory from management accounting scholarship with CCO literature. In the following, I present some of the theoretical contributions to management accounting that are relevant for this study vis-à-vis its suggestion that materiality and communication matters for how PM systems are constituted and how they shape processes of organizing.

3.1. Materiality in management accounting studies

Over the past couple of decades, several studies in management accounting have described the constitutive role of *discourse* in accounting (e.g. Cooper & Ezzamel, 2013; Ezzamel, Willmott, & Worthington, 2008; Gendron, Cooper, & Townley, 2007; Miller & O'Leary, 1987). By contrast, in recent years the field has started paying interest to how *materiality* matters for the making of accountabilities. As the theoretical framework of this paper combines CCO thinking with literature from management accounting studies focused on the role of materiality in accounting practices, the following paragraphs briefly introduce some of this literature.

A number of scholars have described how materiality matters in accounting (Davison, 2011, 2014; Dechow, 2012; Ezzamel & Hoskin, 2002; Hansen & Mouritsen, 1999; McLean & Hoskin, 1998; Qu & Cooper, 2011; Quattrone & Hopper, 2005; Quattrone, 2009a; Revellino & Mouritsen, 2009; Robson, 1992). Some of these studies have formed their contributions based on empirical studies of different empirical accounting phenomena that relate to PM systems, such as Balanced Scorecards (Qu & Cooper, 2011; Dechow, 2012), ERP systems (Quattrone & Hopper, 2005), how technologies made for other purposes act in multiple ways (Revellino & Mouritsen, 2009), and how health care devices produce specific accountabilities (McLean & Hoskin, 1998). Although this study relates to many of these empirical studies with its focus on how PM systems develop in practice, it primarily builds upon some of the more conceptual papers presented above in order to develop a nuanced

vocabulary to describe how materiality becomes communicative in the case study.

In their study of health care practices, McLean and Hoskin (1998) show how the construction and use of templates in particular instances between patients and health professionals shape how mental health work becomes "thinkable" and "manageable" (p. 519). The ways in which health professionals interact with these templates produce certain "spaces" in which work can be managed and compared with other patient information (ibid.). As noted by Quattrone (2009), spaces are also what make accounting performable (p. 89), not only in how they require their users to follow certain directives, but also in how such spaces allow their users to enact them (ibid.). Likewise, Quattrone (2009) identifies the enabling dimensions of hierarchies and accounting systems, in that they are easily operationable while at the same time doing more than what they appear to do (p. 113).

While theorizing about the effects of materialities in accounting, Ezzamel and Hoskin (2002) stress that materiality (or "forms") shape how valuation becomes possible: '[T]he *possibility of valuing* is already given in the practice of recording via signs which name and count' (2002, p. 359, original italics). To support their argument, the authors show how materialities participate in limiting and making some practices and "inventions" more possible than others (2002, p. 346). The authors exemplify their point by describing how the fabrication of money enacted the idea of it being a *supplement* to accounting and writing practices by guaranteeing *equivalence* between the objects. However, this materialization of money did more than that. It effectively made the "accounting/writing/money nexus" (p. 360), which proved to become highly effective in changing accounting practices and defining realities. However, such materialities often appear as *secondary* concerns, if even considered at all (McLean & Hoskin, 1998, p. 537). Nevertheless, they sometimes

play a dominant role in defining that which is usually considered *primary* (Ezzamel & Hoskin, 2002, p. 336)[10]. In order to now describe how materialities and communication constitute PM measures, the CCO perspective will be used.

3.2. A CCO approach

The theoretical framework of this paper, combined with the literature reviewed above, is based on the CCO perspective, also known as the Montreal School turn of CCO literature (Ashcraft, Kuhn & Cooren, 2009; Cooren, Kuhn, Cornelissen, & Clark, 2011; Taylor, 2011; Cooren, 2004), and which was only recently introduced to the management accounting community. In their field study of a construction company, Fauré and Rouleau (2011) showed how budgets were communicatively constituted through conversations between accountants, where specific communicative "micro-practices" were contingent on these accountants' strategic competences. Their analysis revolved around the main argument of the CCO literature: communication constitutes organizing (Cooren et al., 2011). One of the central concepts for CCO, as well as for this paper, is the concept of a *communicative event*[11] (Cooren et al., 2011; Kuhn, 2012; Schoeneborn, 2013; Güney, 2006; Blaschke, Seidl, & Schoeneborn, 2012), which is, for instance, identified as single episodes of communication that contribute to the emergence of organizations (Blaschke et al., 2012, p. 884), i.e. through meetings, team interactions, situations of leadership, and so on. As communication is always understood as being situational in this literature, one of the main premises of CCO literature is that scholars should never leave the realm of communicational events (Cooren et al., 2011, p. 1153). Organizing happens *in* communicative events, and it also happens *through* communicative events (as effects of the relations between them), for instance, when arguments from the past become articulated in the present.

[10] Inspired by Ezzamel and Hoskin's (2002, p. 336) reference to Derrida's (1976) "logic of the supplement".

[11] Which, however, is a concept that has been used interchangeably with the concept of "communication event" and "communicational events".

The CCO perspective defines communication broadly. As suggested by Ashcraft et al. (2009, p. 34), communication is explained as the dual presence of material and symbolic elements; but more specifically, it is defined as the 'ongoing, situated, and embodied process whereby human and non-human agencies interpenetrate ideation and materiality toward meanings that are tangible and axial to organizational existence and organizing phenomena' (ibid.). By recognizing how communicative events constitute organizing, the CCO literature positions itself between the linguistic turn and the material turn within organization studies (F. Cooren et al., 2012, p. 296). Recent CCO literature even describes discourse and materiality as constituted through their dialectical relationship (F. Cooren et al., 2012; Mumby, 2011, p. 1149; Linda L. Putnam, n.d.), which also emphasizes how CCO literature is inspired by actor-network theory (ANT) (Fairhurst & Cooren, 2009). Not only does discourse – often conceptualized as "talk" and "text" (Linda L. Putnam & Fairhurst, 2001) – act communicatively, but materiality does so too. This paper describes various materialities and discourses as communicative elements. It uses the notion of *artefact* when referring to material elements that appear as relevant communicative elements for the making of PM measures. While other studies also use different notions (i.e. inscription, form, and object), the notion of artefact seems to be the most frequently used to describe how materiality matters for organizing in CCO and management accounting studies. It uses the notions of "talk" and "text" to describe the communicative elements, which are often studied generically as discourse in both fields.

As described by Cooren et al., the CCO perspective helps scholars examine 'the multiple ways by which various forms of reality (more or less material) come to *do things* and even *express themselves* in a given interaction' (Cooren et al., 2012, p. 296, original italics). This symmetrical perspective on communication resonates with the way McLean and Hoskin (1998), Ezzamel and Hoskin (2002), and Quattrone (2004, 2009) highlight the relevance of studying the way artefacts, talk, and texts participate in constituting performance measures. In addition, the CCO perspective

adds to these studies by emphasizing the interactive aspects of how artefacts and talk constitute performance measures. Lastly, by insisting on the relevance of studying the situational accomplishments of communication, the CCO perspective also prepares the ground for practice-based studies in management accounting (Baxter & Chua, 2009).

From the CCO literature, a recent example, which is also relevant for the present study, is Schoeneborn's (2013) study of how PowerPoint (PPT) presentations hampered, instead of enabled, consultants' abilities to reconstruct the interactions that constituted the organizing of a project, as relevant information was shaped by the PPT slides (Schoeneborn, 2013, p. 1797). For the present study, the CCO perspective, combined with the insights on how materialities contribute to the making of accountabilities from management accounting research, helps analyse *how* the relations between talk and artefacts constitute a new PM measure through communicative events, which also contributes to the literature focused on the development of enabling PM systems. Based on this theoretical framework, the following research question and sub-question are addressed: *How do text, talk, and artefacts constitute behavioural targets, and how does this challenge the dominant understanding of enabling and coercive performance management systems?*

4.0. Research setting

The case organization, BioTech, is a multinational pharmaceutical company and a global market leader in one treatment area. It employs more than 35,000 people worldwide and performs very well on the stock market. For the past few years, however, top management has emphasized the need to broaden and develop the product pipeline in its research areas so as to ensure future success. In accordance with this agenda, the corporate senior HR management team is continuously updated on the latest global HR trends and best practices. The concept of "behavioural targets" grew out of this declared purpose, and the formal development of the system began in 2010, when a corporate HR sub-department, the Global Performance (GP) department – which owns BioTech's global PM

processes and remuneration strategies – hired an external consultant from a smaller consultancy, Paulson Ltd., to provide input on how the current performance management (PM) system could possibly be improved. BioTech's global PM system is called the People Performance (PP) system. The PP system is globally owned by GP and the basic idea behind it is to link overall organizational strategies to individual goals. The PP system is tightly linked to the Balanced Scorecard of the organization and divided into three overall phases that almost every employee has to follow, which makes this part of the PP system design quite traditional compared to the way most organisations outline their PM systems (Latham et al., 2008). These are the stages of: Goal setting, mid-year review and year-end appraisal.[12] The year-end appraisal closes with an annual performance rating given to the individual employee on a five-point scale, a rating indirectly[13] linked to the distribution of the annual cash bonus.

As argued by Paulson Ltd., the performance potential of the PP system could be increased if more formal efforts were used to manage employees' behaviour. As argued by Paulson Ltd., the PP system could, for instance, benefit from not only measuring *results* but also *processes.* Paulson Ltd. argued that such a focus on processes would incentivize the individuals to engage in more collaborative work, better communication, and the sharing of more ideas during team meetings, as well as participation in the team decision-making processes (Paulson Ltd., 2010). All of which are qualities that resonate with how Adler and Borys (1996), Wouters and Wilderom (2008), and Wouters and Rojimans (2011) characterize enabling PM systems. Following this development, GP liaised with another external consultant from a global consultancy firm at the beginning of 2011. In line with Paulson Ltd., this consultant emphasized the options available for strengthening the

[12] With the exception of a minority of blue-collar workers.

[13] Indirectly, management had the discretion to define the cash bonus for first-line managers. The GP department, however, had a set of guidelines that defined the suggested payout ratio as an effect of the actual performance rating given. Only rarely did managers decide to overrule these guidelines.

feedback culture throughout the organization in order to align employees' behaviours with the organization's value statement, the so-called BioSphere framework[14], as well as to optimize individual and group performance goals. Based on this input, as well as input from Paulson Ltd., and along with discussions at internal GP strategy sessions, GP consultants suggested that BioTech's top management team formally integrate behavioural targets into the existing PP system. In 2011, it was decided that all business units would be advised to integrate a focus on the behavioural aspects of performance into the PP system for the year 2012. The goal was to integrate the behavioural targets into the PP process in 2013 at the latest, but all lines of business were given a large degree of freedom to individually tailor the new performance measures. The corporate intranet (BioTech, 2013) stated that the PP system was 'critical for the success of BioTech' and that, with the integration of behavioural targets, the system would enable and optimize the individual's performance by focusing on both processes and results (the "how" and the "what"): 'We focus on results and *how* results are achieved' (BioTech, 2013, original italics).

5.0. Methodology

This is a qualitative, longitudinal field study spanning 27 months. I have spent approximately every second day in the organization for the past three years, and I was hired by the GP department as an industrial PhD student in May 2012, under an agreement with the department that I would study the interrelationship between the broad topics of PM in the context of innovation over the coming years. From the beginning, I observed that the GP department focused on improving their global PM system, the People Performance (PP) system, and I soon decided to focus specifically on the PM development being done in BioTech's largest research unit, the Protein Research Unit (PRU). I reasoned that this would allow me to study PM in highly complex empirical settings, and already after one-and-a-half weeks of work at BioTech, the concept of behavioural targets appeared to me

[14] "BioSphere" should not be confused with "BioTech". It refers to BioTech's value statement.

as a very interesting, as well as controversial, phenomenon under development. I realized that this was an opportunity to study performance measures "in the making" (Andon et al., 2007; Chua, 1995; Qu & Cooper, 2011; Quattrone, 2004, 2009b). Thus, in order to describe *how* such performance measures are communicatively constituted, I decided to "follow" how this new performance measure appeared through its relations (Latour, 1987).

5.1. The empirical material

The majority of the empirical material used in this paper originates from PRU, while relevant background knowledge about the PP system has been realized through my affiliation with the GP department.

The nature of my presence in the organization varied depending on the specific research setting. For example, as a participant observer, I engaged with colleagues at the GP department by sharing my interests and findings on an ongoing basis at meetings, at lunchtime, and during conversations by the coffee machine. In contrast, I was more of an observer at PRU, where I conducted the majority of the interviews and attended many events. I typically took notes when controversies occurred and digitally recorded what happened when possible. The figure below maps my empirical presence in the GP department of corporate HR and in PRU:

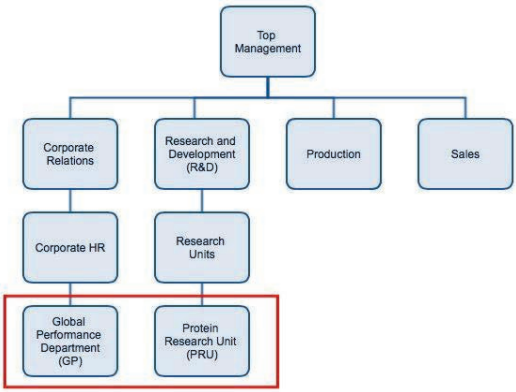

Figure 1. Organization chart showing my presence in the organization.

Two events (E1 and E2), which took place at PRU within a year of each other, provide the main framework for the empirical narrative of the analysis. The first event (E1) formally introduced the new performance measure for the first time, while the second event (E2) followed up on the introduction. E1 and E2 had the same (invited) participants, comprising approximately 70 PRU research managers. Table 1 provides an overview of the empirical events that primarily inform the case:

Events (management seminars)	**Date / Ref-Tag / Duration / Participants**	**Data Generation**
PRU Event 1 (E1 PRU) The first mandatory leadership seminar at PRU on behavioural targets. The seminar was introduced by senior management and facilitated by external consultants and a PRU HR partner.	November 22nd, 2012; E1 PRU; four hours; around 70 research managers attended.	Field notes
PRU Event 2 (E2 PRU) The second mandatory leadership seminar at PRU (a "follow up" event on E1 PRU) on behavioural targets. The seminar was introduced by senior management and facilitated by an external consultant and a PRU HR partner.	November 19th, 2013; E2 PRU; one hour; around 70 research managers attended.	Recorded, transcribed, and field notes
Corporate Human Resource Management seminar (CorpHR E1) A full day seminar for selected parts of the global HR organization. The subject was on global challenges related to "PM", "mobility" and "rewards" policies.	May 15th, 2012; CorpHR E1; one full day; around 80 HR professionals from the global HR organization.	Field notes

Table 1. Overview of selected fieldwork (events).

An external consultancy firm, in collaboration with PRU HR management, facilitated both of the main events (E1 and E2). The first event lasted four hours and the second lasted only one hour. I took extensive field notes at E1, as I did not have the opportunity to record this event. At times, I carefully recorded sentences verbatim to get the accurate wording. This, however, slowed down my note taking, so I was unable to record every word from the sessions. After the seminars ended, I added more information to my field notes on the same day so as not to forget their context. At E2, I was able to record the event. This recording has been professionally transcribed, as have several other seminars at BioTech. From both events (E1 and E2) I also collected all the material that had been provided for the participants, e.g. PPT presentations, corporate video material, and hand-outs.

Although this study draws heavily on specific empirical events, more specifically two mandatory management seminars taking place within a year of each other, two other types of empirical material play important roles in shaping the analysis. In sum, I have conducted 47 semi-structured interviews with 39 different interviewees[15] (one of these was a group interview with three scientists), collected several hundred documents (and had access to several thousand documents on BioTech's intranet and on the GP ShareDrive) and carried out observations, specifically at PRU. The selection of events, interviews and quotes has a significant impact on how the analysis has been composed (Baxter & Chua, 2008). The interviews were significant in that they added relevant context to the events that were described, while the documents, such as PP templates, enabled me to approach the subject of how PM develops from different perspectives. When referring to the interviews, I indicate whether the interviewees are scientists (Res), research managers (ResMan) or

[15] 40 of the 47 interviews were recorded and professionally transcribed. 36 of the 47 interviews were with interviewees from the research organization, PRU (seven of these 36 interviews were interviews with research managers, the rest with scientists), while 11 were with corporate HR professionals. In total, the 47 interviews make up 45 hours of recordings, and the average time of the full-length interviews is around 60 minutes (a handful of the 47 interviews were short).

HR professionals (e.g. HR partner and HR consultant). In order to provide an overview of how the analysis is structured on the basis of the already-described empirical material, the figure below illustrates the order by which the main parts of the empirical material have been used in the analysis. The two main events are marked with blue:

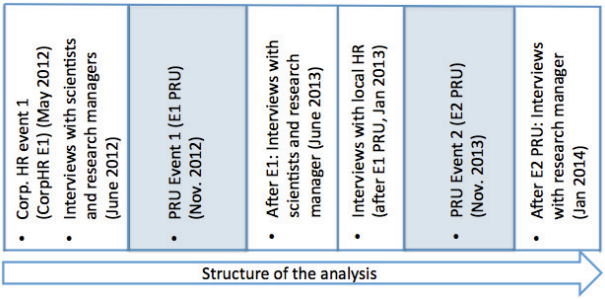

Figure 2. An overview of how the different parts of the empirical material form the analysis.

In addition to my presence at the GP department, and my participation in other events and department meetings, the full study also comprises more than 21 full days of observations from PRU, which have not been directly included in the writing of this paper. Although it is difficult to account for how this longitudinal involvement in the organization has precisely shaped my method and the empirical material, it has nevertheless granted me access to relevant data and engendered the employees' acceptance of me as a legitimate enquirer while conducting my research.

6.0. Constituting behavioural targets through talk and artefacts

6.1. Early debates about behavioural targets in HR, and among scientists

The introduction of this paper presented a fragment from the first of the two events (E1, PRU) in the research unit where the concept of behavioural targets was formally presented for the first time. However, I had already heard about this new performance measure in corporate HR some months before, and even then the new PM measure appeared controversial. At a large, international HR

seminar, a GP consultant described how behavioural targets would provide a good opportunity to assess how people behaved (HR consultant 1, CorpHR E1, 2012). By the end of the presentation, which outlined the global PM policy, the consultant noted that the new performance measure would soon be implemented in several business areas. The presentation was followed by a few critical remarks from the participants who commented that the concept would probably meet resistance throughout the organization due to its somewhat fuzzy nature. In response, another HR staff member stressed that the employees simply needed to get used to the concept over time (HR consultant 2, CorpHR E1, 2012).

Based on my earliest encounters in PRU (June 2012), I was informed that the new management invention might get off to a difficult start: Several scientists noted that behavioural targets did not offer anything new, and that it was not only difficult to make sense of them but also to see how such targets could be measured (Res2, PRU, 2012). On occasion, the concept was associated with something childish in that it implied that the employees had to behave properly (ResMan1, PRU, 2012). Others reasoned that due to already-existing good working environments, it was unnecessary to formalize initiatives intended to help manage the employees' behaviours (Res8, PRU, 2012). One scientist went so far as to compare the idea of behavioural targets to rubber bands, as their elasticity enabled elements from softer categories of management to interfere with project planning (Res1, PRU, 2012). Several interviewees described the new performance measure as simply making the PP process more ambiguous and weird (Res2, PRU, 2012). On the other hand, others, such as the scientist quoted below, emphasized how they feared that behavioural targets would make traditionally soft activities, such as knowledge sharing, into something more "technical" than before:

> It becomes technical, and then you can just enrol for some courses, and then that's fixed. The problem is that it has to 'come from the inside', or something like that. You need to have an atmosphere where the manager appreciates [knowledge sharing], fosters it, I'd say. (Res3, PRU, 2012)

This quote highlights the same potential problem as the problem highlighted by the consultant at the first PRU event (E1 PRU, 2012). This identified downside of making the concept operational and into a check-the-box exercise touches upon how the initiative might become "coercive" in Adler and Borys's (1996) theory. Armed with these insights into how behavioural targets were initially described by several researchers and research managers in PRU prior to the concept's formal implementation, we can now return back to the point in time where this new PM measure was first formally presented for the audience of research managers (E1, 2012).

6.2. Event 1: Attempts at constituting behavioural targets as "enabling"

Although some of the research managers had already heard about the new measure, none of them had tried to introduce it into their respective research teams. Hence, the purpose of this management seminar (E1 PRU, 2012) was to introduce the new concept to the managers. Moreover, the audience had already been promised a follow-up seminar on the subject of behavioural targets the following year (E2 PRU, 2013). One of the first PowerPoint (PPT) slides shown by the consultant stated that 1) using behavioural targets would enable employees to achieve their full potential while they would, at the same time, support the organization's declared value statement (BioTech Way); that 2) research proved that a 'competence-based focus in performance management' would improve organizational results due to its ability to increase "fairness" and "transparency" in the PM process; and that 3) the concept of behavioural targets was especially relevant in research like PRU's, where

business targets were often on the move (Figure 3, E1 PRU, 2012). The figure below presents the slide that served as background to the unfolding of these statements:

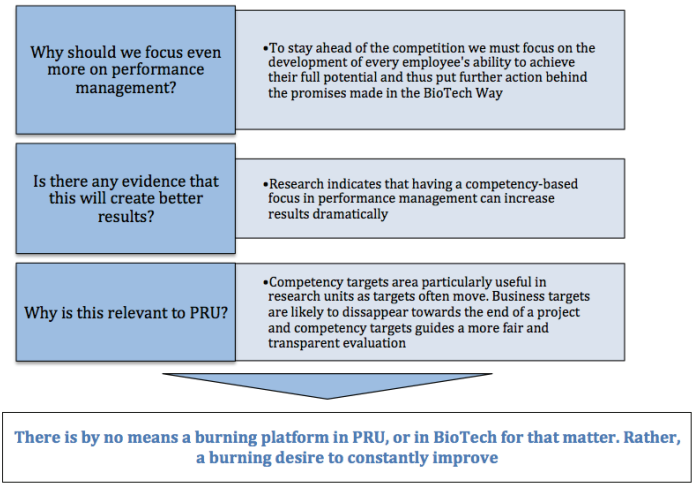

Figure 3. PPT slide from the mandatory seminar for research managers in the Protein Research Unit (E1 PRU) headlined: 'Why should we focus on performance management? We are already doing great!', slide no. 3.

Referring to the PPT slide (Figure 3), the consultant stressed that the introduction of behavioural targets was by no means motivated by 'a burning platform' in the organization, but rather the organization's burning desire to constantly improve. Moreover, the consultant made it clear that he was sure that every manager present was very ambitious and filled with this burning desire (Consultant, E1 PRU, 2012). The consultant elaborated on this by noting that 'we all want to improve', and he subsequently offered an answer to the possible question of how the current success could at least be maintained, arguing that 'we need to stay on our toes to keep our position'. The consultant's recurrent use of the pronoun "we" suggested that he and the audience were all part of the same project. He spoke on behalf of BioTech. At the event, the PPT slide as artefact and the consultant's talk shaped the purpose of behavioural targets. The PPT slide had a built-in progression

towards the text on the bottom of the slide, showing that there was a ‘burning desire to constantly improve’ (Figure 3). In combination with the consultant’s talk, these communicative elements suggested that behavioural targets would enable employees and managers to ‘constantly improve’ and therefore fulfil their shared desires.

The consultant continued to shape the purpose behind introducing behavioural targets by using the metaphor that it was important to ‘stay on our toes’ in order to keep up with the latest management trends. Hence, the form of the shown slide, linearly (and quasi-logically) boosted the conclusion that there was no better solution other than implementing behavioural targets in the organization. Thus, the consultant indicated that a shared, complete acceptance of the concept of behavioural targets was needed to secure future organizational success. Hence, any potential reluctance to accepting the new performance measure represented a risk. The consultant added to his arguments by contending that the use of behavioural targets would enable both regular employees and managers to do a better job as managers. Employees, he argued, would gain a better understanding of the factors that influenced their performance evaluation and would also feel more accurately evaluated. These points reflect Adler and Borys’s (1996) points about what gives bureaucracies an enabling quality and illustrates how the consultant, through different communicative elements, began to produce an event in which the new performance measure was presented as an enabling management technology. The presentation of “the enabling” was in the making.

In addition to discussing relevancy, the consultant maintained that behavioural targets were more flexible and ambiguous than business targets, thus allowing them to produce greater enablement in a research context where ‘targets often move’ (cf. Fig. 3). Improved *flexibility* in the system, which is also one of Adler and Borys’s key points regarding what makes systems enabling, was suggested

as one of the bigger advantages of the new performance measure. As already stated in the introduction of this paper, however, the consultant made it clear that these enabling qualities could only be achieved if managers engaged in *interaction* with their employees. As mentioned, the exercise of using behavioural targets should not become a mechanistic and coercive process: 'So what you should do is to generate observations that can help the formal project evaluation. The big *don't do* is that this becomes "check-the-box targets" ' (Consultant, E1 PRU, 2012). Almost taken out of Adler and Borys's analytical vocabulary, the consultant here warned the audience of a potential downside of the new PM measure. If it was not handled with care, it could end up having the opposite effects to the intended (coercive) effects.

The consultant's warnings echoed some of the recorded voices from my interviews. Several PRU scientists and research managers seemed highly passionate about having the autonomy to do their specialized jobs without being constantly monitored. Some of the recurrent messages from the scientists, for instance, concerned how management needed to be characterized by trust, recognition, and dialogue – albeit with some structured initiatives to ensure that work is followed up on (Res6, E1 PRU 2012) – that would provide the scientists with autonomy to freely search for new areas (Res1, PRU, 2012; Res8, PRU 2012; Res12, PRU, 2013), enable them to initiate collaboration across project boundaries (Res1, PRU, 2012), and allow them time to develop their knowledge (Res2, PRU, 2012).

6.2.1. Building performance spaces with artefacts and talk

Yet another PPT slide showing a round-shaped figure was presented for the audience as an answer to the question of *how* the new phenomenon of behavioural targets suited the already-existing PP system. The headline of this slide made it clear that the new performance measure was intended to make PM more enabling, as it allowed managers and employees to talk about the processes (the

"how") that lead to great results (the "what"). The heading for the slide was, 'To achieve the full performance potential of the individual we must focus on both WHAT and HOW'.

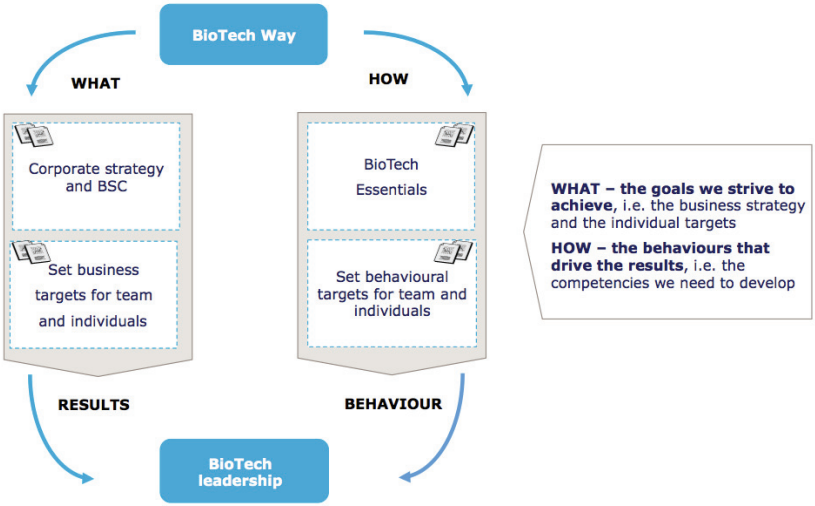

Figure 4. PPT slide on the 'WHAT and HOW' model.

While discussing the figure, the consultant reasoned that *balancing* the measurements of the "WHAT" and the "HOW" was key to achieving the aim of realizing the full performance potential of each individual (PPT slide no. 13). The consultant argued that behavioural targets made the PP system more *holistic* than before (Consultant, E1 PRU, 2012). The "HOW" was explained by individuals' behaviours, while the "WHAT" was associated with the results produced. Bounded by blue, curved arrows, and conveying a balanced approach to measuring processes and results, the artefact constituted a coherent image of the new PM policy supported by the consultant's talk. This presentation of "how targets" (behavioural targets) also influenced the ways in which "what targets" were presented (the traditional business targets). The artefact offered a space in which the two performance measures mutually constituted and legitimized the others' existence through their

visual opposition, which implied that each of the targets had its own specific quality, and that the sum of the two made a complete PM technology. Hence, the artefact only made sense if the audience accepted its offered managerial possibilities, which were characterized by a mutually constituted dichotomy between "managing results" on the one hand and "managing processes" on the other. This dichotomy assumed that certain managerial activities would occur on one side of the space while other managerial activities would occur on the other. Certain possibilities for valuing employee performance were made more possible in some formal spaces compared to other spaces, based on the visual signs that were offered by the artefact (Ezzamel & Hoskin, 2002, p. 359). However, there was still ambiguity regarding how such behavioural targets could be operationalized.

6.2.2. Requirements for enabling spaces

The consultant introduced yet another artefact, which further added to the idea of how the new performance measure induced balance between results and behaviours. A corporate video, prefaced by pleasant piano music filling the auditorium, showed the CEO of BioTech appearing on a big screen. While the CEO narrated his five-minute story on PM in BioTech, a hand continuously illustrated the CEO's key points with drawings of employees, managers, and so forth. The drawings often appeared as metaphors for the points mentioned. For example, individual performance was illustrated as an employee climbing up a tall ladder, the higher the employee climbed, the better the performance rating in the PP system. The relevance of behavioural targets was indicated right from the start of his talk – as testified by the first 30 seconds of the video:

> [T]he only way to have a sustainable company and a sustainable business is to ensure that we, on one hand, achieve outstanding results, but that we achieve the results in a way that lives up to the values and the integrity of the company. (CEO of BioTech, PM video, seconds: 10-30)

When the CEO described how the organization needed to ensure outstanding results, a drawing appeared (Figure 5) depicting the "What and How" model as someone walking across a tightrope. Immediately after, the CEO elaborated on the individual consequences of this balancing act:

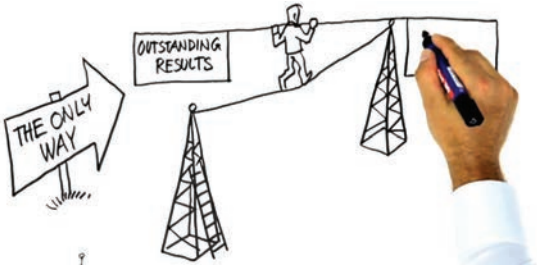

Figure 5. Snapshot of BioTech's corporate video on performance management, available to all employees from the organization's intranet portal.

> Our performance as a company is depending on individual performance. So your individual performance is important to the company. Not only the results that you achieve, but also the way you achieve the results. (CEO of BioTech, PM video, seconds: 31-39)

The tightrope walker represented the challenge of balancing "outstanding results" with "the way" results were achieved. At the event, these communicative elements, interactions between artefacts, and talk added to the presentation of how behavioural targets produced a more *balanced* and *enabling* PP system. Metaphorically speaking, using enabling behavioural targets would not only ensure balance. Using them to create harmony between the "what" and the "how" would also enable the users of the new performance measure to walk without falling. Hence, the video sequence at this event added to the already-offered management spaces by highlighting how it was a requirement for people to recognize the value of behavioural targets if they were to follow "the only way" (cf. Figure 5).

6.2.4. Contesting the idea of behavioural targets as enabling

The participants reacted critically to these efforts to constitute the new performance measure as a holistic, balanced, and enabling phenomenon. The essence of their comments revolved around difficulties in understanding what it was all about (ResMan A, E1 PRU, 2012). In fact, they tended to find the new PM concept more complex (ResMan B, E1 PRU, 2012). Moreover, several research managers emphasized that they were already engaged in the behaviours being asked of them (manage both processes and results) (ResMan A, C, D, & E, E1 PRU, 2012). For quite some time, it seemed that the consultant and the participants were focused on two different main problems in the constitution of what should be a common measure. The consultant emphasized how it was challenging but rewarding to focus on setting behavioural targets and reflecting on them. The participants, however, were more concerned with how to "monitor", "measure", and "evaluate" the activities that this new performance measure would produce (ResMan B, F, & G, E1 PRU, 2012).

In response, the consultant did his best to convince the participants that the concept would increase the transparency, fairness, and accuracy of the already-existing PP system. He asked everyone to find a laminated card the size of a large matchbox (Figure 6) in the materials for the seminar on their tables. While waiving his own copy in the air, he read the text on it out loud: 'Sounds like a great concept, but what do you mean?' He then asked everyone to turn the card over, which listed the four rules for setting behavioural targets:

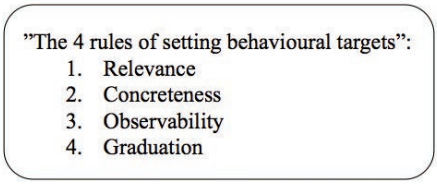

Figure 6. Backside of a card, provided in the materials for the seminar, that describes four rules for setting behavioural targets.

The four rules were emphasized as key guidelines, but they did not stand alone as a means to define the new measure. The consultant presented a catalogue from the participants' materials and told them that it, combined with the four rules, would help managers and employees formulate their behavioural targets (Consultant, E1 PRU, 2012). Subsequently, managers were asked to practice the process of independently formulating behavioural targets for the first time. The criticism from the managers, however, did not fade. Obviously, many of the managers still found it difficult to see the meaning of the concept, and remarks concerning how to make the new performance measure visible and measurable were voiced from several places. It was clearly communicated by the research managers that behavioural targets needed to become more concrete and less ambiguous for them to become enabling for their management practices. When I met the lead consultant at the GP department later that week, one of his first comments jokingly confirmed that I was not the only one who thought that introducing the new concept had been a tough exercise.

Apparently, the outcome of the analysed events was not considered successful, neither by the consultant nor local HR. This raises the general question of what defines successful management communication, as well as whether or when management accountants (and strategists) should consider changing their approach? Is it to satisfy the audience at a given communicative event? While this paper does not intend to answer all of these questions, it has already shown that it makes little sense to ascribe qualities to performance measures a priori. These measures appear through the interplay between talk, texts, and artefacts *in* communicative events. The following paragraphs show how the interrelatedness *between* communicative events also participates in the making of PM.

6.3. Testing and evaluating behavioural targets in a research department

Six months after the first event (E1 PRU, 2012), I interviewed a research manager regarding his decision to integrate behavioural targets into his department. Here, he explained how the mandatory seminar had been too fluffy and lacked concreteness, which made it difficult to explain to the rest of the department what they should do with it (ResMan7, 2013). Obviously, his employees had the same feeling, as indicated by the group interview shown below. Here, the scientists reflect upon whether their reluctance could be explained by their scientific backgrounds:

> **Scientist 12:** I'm really wondering why, because I know that people from other departments – some of the ones who have used this way back – have been happy using [behavioural targets]. They say that it's been really good and they don't understand our scepticism. So, maybe it's just us.
>
> **Scientist 13:** I think it's like… this about being a scientist… I mean…
>
> **Scientist 11:** We put everything into a box.
>
> **Scientist 13:** Yes, and all of our results rely on our research findings. In this way, this way of thinking [behavioural targets] appears irrelevant […]. Maybe something about achieving to have x-number of meetings per year with Mr A and Mrs B and… I mean, we don't have that at all.
>
> **Interviewer:** So do you refer to the fact that you're anchored in natural science – and therefore the humanist aspects of behavioural targets do not fit?
>
> **Scientist 13:** It's definitely very far away from the targets that we already have. Some other employees might have some behavioural targets that are more closely related to the targets that they already have. I mean, 'yes'.

Nevertheless, the research manager also emphasized how the "soft version" of the concept (inspired by E1) had also had enabling effects on the way his employees worked with their behaviours:

> I have decided to inscribe [the behavioural targets] into the [PP template] […]. But I haven't tried to strive for actually measuring them […]. So we look at, and identify, *what* we want to achieve, and then we go for a very soft version [of the concept this year], where we talk about that […] – how they actually identify their own behaviours that they would like to change. I think we've won a lot in doing this. (ResMan7, PRU, 2013)

Given that the use of behavioural targets in PRU was not merely an activity meant for the employees, the research manager cited above had also formulated his own individual behavioural target after the first event. The screen shot shown below (Figure 7) shows one of his individual behavioural targets from his PP form:

Supporting Competence Goals	**CSF: Behavioual target: Stakeholder management** **KPI:** Proactively engage with people important for the progress of the project at all different levels internally and externally. **Target:** **Employee Comments:** **Manager Comments:**		1.00		**Employee:** This becomes easier and easier the more people I get to know in the organization **Manager:** On track and great progress - but important expectation management challenge to be handled, concerning [redacted]	**Employee:** I think this is improving continously as the awareness is increased **Manager:** agree - I think that you are sitting in the center of the spiders web and hence you should realy expand you collegial network. The success also lies in getting full buy in from other parts of the organisatoin.	**Employee:** [redacted] **Manager:** [redacted]

Figure 7. Screen shot of a research manager's personal PP form, showing the individually formulated behavioural target he submitted after the first mandatory seminar (E1 PRU, 2012) as well as his manager's evaluative comments given by year-end 2013.

The key performance indicator (KPI) serves as the most detailed part of the behavioural target, which is called "Stakeholder management". The KPI states: 'Proactively engage with people important for the progress of the project at all different levels, internally and externally'. As shown under "Employee" (which refers to the research manager), his "self-appraisal" is characterized by judgment. His self-appraisal of this behavioural target states: 'This becomes easier and easier the more people I get to know in the organization', and his manager responds: 'On track and great progress – but important expectation management challenges to be handled concerning …' (Figure 7, 2013).

6.4. Planning the constitution of behavioural performance measures based on past events

Two months after the first event (E1 PRU, 2012), I interviewed the HR partner responsible from PRU (HR Partner 1). I openly asked her about how she thought things had passed at the event. The HR partner told me that the harsh feedback given during and after the event meant that the PRU HR organization, together with the external consultants, would have to work extra hard to *clarify* the new performance measure before the already-promised mandatory follow up session (E2 PRU, 2013). Evidently, the research managers' critique seemed to have affected the planning of how HR would further develop the new performance measure. The concept needed to become clearer and more operational in order to better fit the ways in which the participants were thinking and acting. The HR partner stressed:

> So when [the managers] say that they need to have less – that they want to go directly to the point, and that it has to be very *clear* […]. I'm very attentive to their feedback, I really am […]. It just has to be structured in a very different way that appeals to their way of thinking and acting […]. (HR partner, PRU, 2013, italics added) .

According to the HR partner, the purpose would now be to constitute and disseminate the phenomenon of the new PM measure in a way that would fit the HR partner's understanding of the research managers' *thinking* and *acting*. The HR partner considered it as important to be attentive to the demands uttered by the audience at the first event (E1 PRU, 2012). According to the HR partner, the research managers' thinking and acting demanded that the new performance measure was made more operational, less ambiguous, and hence more *enabling* in practice. Initially, the HR partner's attentive approach seems related to the arguments promoted by much of the literature on the subject of PM development where, for instance, Wouters and Wilderom (2008) argue for "user involvement" in the process. However, in this situation the user involvement is very limited. It cannot be understood as "user participation" as described by Wouters and Rojimans (2011), although this has been promoted as beneficial for the development of enabling management accounting systems. The HR partner seemed convinced that HR needed to do its best to make the behavioural targets more operable and enabling. At the same time, it was still recognized that the new technology should not end up as a check-the-box exercise: 'We will do much to avoid that this becomes just another check-off exercise. If that happens, it would end up mattering less for the individual employee' (HR partner, PRU, 2013).

6.5. Event 2: Re-presenting behavioural targets

November 9th, 2013, Auditorium B, Event 2
Protein Research Unit (PRU), BioTech

One year after the first event, a consultant from the same firm as the consultant facilitating the first event (E1 PRU, 2012) led the promised follow-up seminar on behavioural targets in PRU (E2 PRU, 2013). It was clear from the beginning of the seminar that the HR partner and the consultant had decided to specifically address the challenges involved in measuring behaviour when using behavioural targets. According to one of the research area's HR partners, they had worked back and

forth a great deal with the consultants to decide how the content of the seminar should be formed and what the communication should be like (HR partner 2, 2014). At the second event, while the concept of behavioural targets was still explained as something "very important", it was also explained as something "very difficult". The four rules on setting behavioural targets presented at the first event (E1 PRU, 2012) quickly took on a more significant role. While going through the four rules, the consultant particularly highlighted how focusing on observability and concreteness could be used as a means to quantify specific qualitative challenges:

> When you review the targets and when you set the new targets, make sure they are relevant. That they are concrete things. Things we can actually see and observe. I mean, we make jokes about it, you can't see if somebody is actually thinking … when they are staring out the window. (Consultant, E2 PRU, 2013)

Using the following example, the consultant suggested how to approach the overall challenge of improving stakeholder engagement:

> It's very hard to observe whether they're thinking, or grieving, or just not there at all. So try to find things that you can actually observe and then try to find things that you can actually [grade]… Have a meeting with your key stakeholder. You can have one meeting, two meetings, three meetings, a lot of meetings. You can actually see that there are a number of things that can be used to evaluate your behaviour. (Consultant, S2, 2013)

The local HR partner subsequently explained in more detail how this suggested approach meant that managers had to be able to follow the progress of these individual activities:

> I mean, you can take this so concretely as you can check [them off], I mean, "did the project member do this, or did he not do this?" […] [T]he more concrete that we can do it, the more it will be possible for you to give the feedback and discuss "did the employee do some of these things or not, and to what extent?" (HR partner, PRU, S2, 2013)

The consultant then illustrated how the vocabulary of a Balanced Scorecard was already integrated into the PP system through its PP forms. These could in turn be useful in the process of breaking down the overall, but difficult, behavioural targets into more concrete and measurable discursive elements by focusing on critical success factors, KPIs, and targets:

> Initially, the critical success factor is [about] what we want to happen. But it's hard to measure. *We then decide on how we're going to measure it. And here we actually set measures that you guys can obviously observe and give feedback on*. And that's why setting behavioural targets, even though it's difficult, is very valuable for everybody. (Consultant, S2, 2013, emphasis added)

While explaining the process of going from CSFs to KPIs and to targets, the consultant pointed to different stages on the figure shown below (Figure 8). The consultant clarified that the "what" and the "how" were closely related, but that both types of targets needed to be made measurable. To explain this need, the consultant presented how the "SMART approach" would enable the audience in measuring behaviours – although this would not always be easy, as subsequently noted by the HR partner:

Figure 8. Presenting the link between SMART management and setting PM targets.

> **Consultant**: The "what" and the "how" are very closely connected. I actually like the... When you make it "SMART" like this [the consultant pointed at the red marked letters at the top of the slide]. The critical success factor is like the "specific" part of SMART, right? It keeps your eye on the measurement part. And then the last part is the "ART". And where this happens, there is management. You have to make choices, you have to decide: Does this sound like "a what", does this sound like "a how"? Can you agree with your employees on it? Then it's good […] Can you observe it, can you give feedback on it? That's the most important part, and there is always a degree of art or management involved in that.
>
> **HR Partner:** But we can also say that it's complicated with these behavioural targets, so we see this as a journey where we're taking it to the next steps, and we will learn more in 2014.

A few minutes later, the consultant and the HR partner introduced an additional artefact, the STAR-AR model (Figure 9), which was then handed-out to the participants. Shaped like a star, this communicative element suggested that the formulation and evaluation of business targets and behavioural targets should be guided by managerial feedback that related to how the employees'

activities could be described, essentially by referring to specific Situations, Tasks, Actions, and Results. To round out the approach, an additional and important "AR" was added to the model to reflect how managers should also encourage an Alternative Result:

Figure 9. The STAR-AR model to aid in the evaluation of behavioural targets.

The consultant stressed that this model was intended to help the participants monitor and measure people's behaviour and to 'become more objective in what actually happened' (Consultant, E2 PRU, 2013). The consultant also explained that the model could be used as an instrument to aid managers in giving highly specific feedback on behavioural targets:

> What did you do, and what did that lead to? If the result was perfect and great then you stop at the STAR. And if the result was not as expected, you add the alternative action, and you convey what could be the alternative outcome, the alternative result […]. So, the STAR-AR is actually a tool that you can use every time you give feedback […]. Just take a minute every time you give feedback, and chup, chup, chup [the consultant pointed at each of the letters from the model] you go through [the four guidelines] and … you proceed. (Consultant, E2 PRU, 2013)

The STAR-AR artefact added a new dimension to behavioural targets. Based on the premise that good behavioural targets have to produce outcomes or results that can be objectively observed, the

importance of the four rules for setting behavioural targets were emphasized further. Concreteness and observability were necessary ingredients, while the more ambiguous points about balancing "the what" and "the how" remained absent. Much of the seminar was instead spent on discussing examples of behavioural targets in an attempt to clarify the concept. The second example described by the consultant is summarized in Figure 10, where the last four sentences represent the behavioural targets.

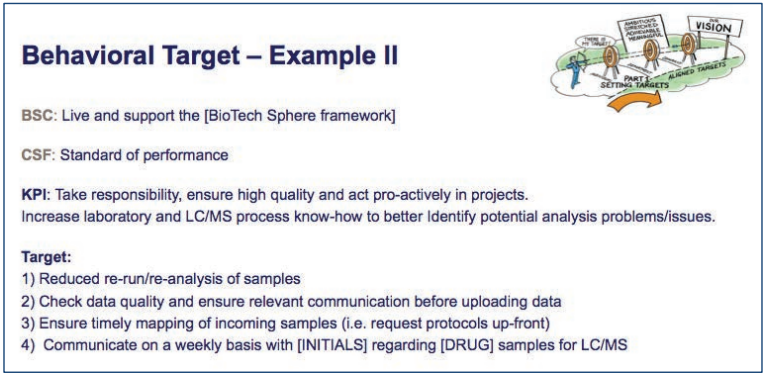

Figure 10. PPT slide promoting an example of a set of behavioural targets.

As the consultant went through the example above, he started out by analysing how responsibility and proactivity were the overall key qualities that the targets should help realize. In the next step, he emphasized the challenge of translating these qualities into measureable activities:

> How can we measure that? Well, we can check the quality of the analysis. We can check the qualitative data, and we can check the interaction with stakeholders. These are things we can actually observe and measure. Then the question is: So how much quality in the analysis, how much quality in the data, how much interaction [is needed to] actually set the targets. In this case, the

> targets were set “reduce re-run”, “always check quality”, and “communicate on a weekly basis”. (Consultant, E2 PRU, 2013)

Up until this point in the presentation, there had been no comments from the participants. I wondered whether the silence was due to mere acceptance or to the fact that everything was suddenly more clearly understood by the research managers. However, one thing was apparent: The formal presentation of how to understand and use behavioural targets had dramatically changed since the year before. Instead of showing holistic, round-shaped artefacts, supported by talk about balancing “the what” and “the how”, the consultant made behavioural targets operable by offering tangible directives, aided by the principles of the Balanced Scorecard. The consultant and the HR partner had, at least at this event, suggested that the enabling aspects of the new PM measure would appear through tangible and structured management initiatives. This answered the critique raised by the research managers the year before. However, the previous warnings – regarding how the new measure should not encourage check-in-the box management initiatives – had changed into something resembling the opposite. This highlights the fact that the notions of the enabling and the coercive need to be considered in terms of how the phenomenon under study appears and develops in and through specific communicative events. In other words, formal design, ideas, and intentions related to the use of PM systems need to be studied in practice if we are to advance our understanding of the ways in which PM systems become enabling or coercive. Studying communicative events provides a good starting point.

6.6. After Event 2: Re-interpreting behavioural targets

Two months after the second event (E2 PRU, 2013), I interviewed the same research manager I interviewed after the first event (E1 PRU, 2012). I asked him whether he had considered how to

formulate the upcoming behavioural targets that needed to be submitted to the PP system in the following month. He replied:

> Now it's for real… Now we have to feel that … I haven't had so many cases on formulating them yet, but for the ones that I've had, the employees have actually formulated some good ones. [My employees] have found inspiration on the intranet and something like that. And some of [the targets] actually make sense. I personally think it's difficult. Because, what is it actually we need to do? Again, I think the big advantage is that we find some things to discuss. And when we then approach the mid-year review, we can say: "Well, OK, how did you carry out this one?" So, it's much more like… When it becomes formulated into text, it receives much more attention. (ResMan7, PRU, 2014)

The above quote explicitly stresses how the content of E2 influenced how the research manager related to the system. The PP form he submitted a month after the interview, shown in Figure 11, further exemplifies this point.

Supporting Competence Goals	**CSF: Behavioural target: Take responsibility, ensure high quality and act pro-actively in the core group** **KPI:** 1. Plan ahead 2. Interact with stakeholders **Target:** Well prepared to meetings Timely follow-up of plans Adhere to the Agile principle of planning and reporting [redacted] tour 2014 visit at least 2 departments to introduce project and scope and at least 1 cVP area presentation [redacted] **Employee Comments:** **Manager Comments:**	31 Dec 2014	3.00	**Bonus**	**Employee:** On track **Manager:** [redacted] - I agree that you have been very communicative and have recieved a lot of attention in the organisation proper... good job	**Employee:** **Manager:**	**Employee:** undefined **Manager:** undefined

Figure 11. Screen shot of a research manager's personal PP form, showing the individually formulated behavioural target he submitted after the second mandatory management seminar on behavioural targets (E2 PRU, 2013) as well as his manager's evaluative comments given by mid-year 2014.

As the above PP form illustrates, several of the elements that comprise the specific behavioural target in the PP form now align with the recommendations highlighted at E2. Compared to the year before, the target was more quantitative and reflected how the research manager – based on dialogue with his manager – had made himself accountable for achieving a set of more specific activities. For instance, the manager committed himself to being "well prepared" for meetings, to conducting "timely follow-up" activities on plans, and to planning for, and reporting on, a guided tour around the research site with at least two visiting departments. Some of the activities, however, were more ambiguous. For example, the manager had promised to adhere to a set of specific management principles. Here, the manager's self-appraisal comment on the behavioural target was reduced to a more denotative comment [he considered himself being 'On track' with this target, cf. Figure 11 column 6]. His superior's comment was more qualitative: 'I agree that you have been very communicative and [you] have received a lot of attention in the organisation proper… [G]ood job' (Figure 11, 2014).

7.0. The shaping and constitution of behavioural targets

7.1. How enabling aspects of PM turn into their opposite characteristics

The case shows how ongoing attempts to make an *enabling* PM system paradoxically develop into making a management technology that, at least at first glance, appears to match Adler and Borys's (1996) characterisation of *coercive* bureaucracies. The extent to which HR and the consultants were aware of this trade off remains an unanswered question, yet it is certain that it was a deliberate choice to make the concept appear more operational. This was accomplished with artefacts, talk, and texts.

While this study has primarily studied specific events, it has offered thorough descriptions of the ways in which communicative elements shape specific communicative events through their

interactions. It remains an empirical question to study how specific appearances (through the studied communicative events) become constituted over time in the organization. However, this study highlights how specific communicative events, shaped by talk, texts, and artefacts, impact the way PM systems are shaped in organizational settings.

Empirically, the case illustrates how the presentation of a new performance measure changes over time (from E1 PRU, 2012 to E2 PRU, 2013). Several communicative elements shaped the appearance of the new performance measure, while its formal design features remained unchanged throughout this study; the formal description of the measure (i.e. in BioTech's Standard Operational Procedures) remained the same even though the approach and purpose of using it changed dramatically. At event one (E1), the new performance measure was presented as a qualitative and somewhat ambiguous management tool. The audience was encouraged to do what they could to avoid using this new tool in mechanistic ways. A check-the-box exercise was repeatedly highlighted as a risk scenario. At event two (E2), behavioural targets were presented as a more instrumental and mechanistic management technology compared to how they were presented at E1. The audience was informed of the importance of using behavioural targets in a structured way that would enable the managers to firmly plan and closely monitor their employees' behaviours. By drawing on the vocabulary of the Balanced Scorecard, consultants and HR argued that relevant behaviours should be made observable, and a check-the-box approach was explicitly suggested as a best practice.

The case illustrated that the research managers had problems accepting the "holistic" and "balanced" artefacts that were presented at event one (E1 PRU, 2012). Their feedback successfully convinced HR to produce a new set of artefacts that should communicate the phenomenon, along

with a series of new arguments delivered by talk and texts at event two (E2 PRU, 2013). At this event, the performance measure suddenly appeared *coercive*, as described by Adler and Borys's (1996) theory. However, it also seemed to be *enabling* for the managers, although both the research managers and the scientists had highlighted in the interviews how trust, dialogue and other ambiguous descriptions enabled them to perform well (see the end of paragraph 6.2.1). These rather divergent aspects demonstrate that we need to recognize the relevance of studying the processes of *how* PM systems are communicatively accomplished in and between events. This study also demonstrates how Adler and Borys's (1996) dichotomous framework of enabling and coercive bureaucracies experience trouble when attempting to explain the development of the case, as there is no causal relationship between the formal design of PM measures and their effects. This raises a series of theoretical and practical implications, some of which will be discussed in the following paragraphs.

7.2. PM constituted in and through communicative events

This study contributes to the literature on the development of enabling PM systems (Groen et al., 2012; Wouters & Rojimans, 2011; Wouters & Wilderom, 2008) in several ways. First, it shows how PM effects are communicative accomplishments realized *in* and *through* communicative events, all of which are shaped by interactions between talk and artefacts. Thus, PM systems or performance measures and their relative effects are never more definitive than their communicative constitution allows them to be in the event. Hence, this study shows that the qualities of a PM system cannot be determined a priori based on the system's design features. This finding challenges the basic idea behind Adler and Borys's (1996) framework of enabling and coercive bureaucracies, as they suggest that these qualities depend on how the features of a given system are designed. Wouters and Wilderom (2008), Wouters & Rojimans (2011), and Groen et al. (2012) share the assumption that system design and implementation determine the system's effect, although, at the

same time, they emphasize the importance of prioritising dialogue, participation, and experimentation in PM development. In addition, these papers share the perspective that the primary task of a given PM system is to ensure the most effective utilization of the employees' knowledge. Based on the argument that PM systems are constituted through the interplay of communicative elements in and through communicative events, this study contributes to their research by showing *how* relations between artefacts, texts, and talk shape the way PM systems are practically accomplished in the first place. This challenges the classic premises for discussing what is enabling and what is coercive, which leads to the second contribution: this paper illustrates that it is not possible to definitively categorize when PM systems are enabling or coercive. These qualities might very well appear at the same time in the same communicative events, just as a system with unchanged formal design features might develop an appearance that is radically different from how it was presented in the first place. Instead of documenting *what* is enabling or coercive, this study shows that the arguments about what would hypothetically make such a system an enabling or coercive PM system can effectively change how PM systems become constituted over time. The constitution of PM measures occurs in and between communicative events. Thus, this study illustrates that it is impossible to make a clear delineation between the accounting ideas and accounting practices (Hopwood, 1987, p. 211). And third, this study shows that it does not make sense to differentiate between stages of design, implementation, and utilization of PM systems, as suggested by Wouters and Wilderom (2008), Wouters and Rojimans (2011), and Groen et al. (2012). Given that texts, artefacts, and talk from past communicative events might very well be represented in the present, this challenges traditional stage-oriented thinking of PM development. Any quality of a given management technology will be effective from the very moment that its communicative elements relate in and through communicative events.

This study has not aimed to document or identify what makes PM systems enabling or coercive. On the contrary, it has shown how enabling or coercive aspects of PM systems rely on what is communicatively constituted in and between events. Artefacts, talk, and text shape these events and hence the spaces in which activities and arguments take place. Instead of seeking an answer that causally predicts the relationship between the discourse of accounting and its practical intervention (Hopwood, 1987, p. 112), this paper has investigated this relationship empirically and from a communicative perspective. Although this study has offered detailed descriptions of how these communicative elements developed, it is impossible to determine exactly which interactions caused which effects. However, the empirical narrative highlights some of the concerns raised by Ezzamel and Hoskin (2002) and Hoskin and McLean (1998) regarding the way in which something that is usually considered as secondary, such as artefacts and talk in communicative events, might very well end up playing a primary role for how a PM system is constituted, as well as for how organizations organize their activities. The case demonstrated that the interaction between talk, artefacts, and text offers an opportunity for us to describe the spaces, arguments, constraints, and possibilities that appear through these relations. This does not imply that tangible design features of PM systems (such as whether they use performance ratings or not) do not matter, they may very well do so; but to answer how they matter is an empirical question. The way such communicative elements interact shapes the spaces in which enabling or coercive aspects of PM systems become in practice. Therefore, no communicative element is ever privileged over another a priori.

8.0. Conclusion

Based on a longitudinal case study, this paper shows how a new performance measure, so-called behavioural targets, developed into a very different accounting phenomenon than what was initially intended. The measure was initially declared to be able to optimize performance through a set of flexible and somewhat ambiguous practices. This study illustrates how managerial attempts at

constituting a more *holistic* PM system paradoxically ended up presenting the system as a more *mechanistic* PM system, although its formal design features remained unchanged. At the same time, the study argues that what is presented as "holistic" may not be "enabling" (Adler & Borys, 1996). Likewise, what seems mechanistic is not necessarily related to "coercive" effects. This highlights the theoretical contribution of this paper to practice-based studies in management accounting, particularly the literature on the development of enabling PM systems (Adler & Borys, 1996; Wouters & Rojimans, 2011; Wouters & Wilderom, 2008; Groen et al., 2012). First, this study argues that enabling or coercive characteristics of a given PM system cannot be ascribed to the system a priori; such effects depend on the interaction between communicative elements. Second, this study illustrates *how* communicative elements interact in and between communicative events while constituting performance management (PM). Hence, enabling and coercive effects are moving targets as they come into existence through their communicative relations. Third, this study challenges Adler and Borys's (1996) influential theory by highlighting that enabling and coercive aspects of PM systems should not be defined as dichotomous and mutually exclusive phenomena, but instead effects that are constituted through communication on an ongoing basis. By drawing upon a particular communication perspective from organization theory, the so-called CCO perspective (Ashcraft, Kuhn & Cooren, 2009; Cooren, Kuhn, Cornelissen, & Clark, 2011; Taylor, 2011; Cooren, 2004; Schoeneborn, 2013), this study demonstrates how communicative elements, such as talk and artefacts, which are often considered as secondary (Hoskin & McLean, 1998), participated in radically changing that which was empirically considered as primary, in this case, a new PM measure. This happened *in* and *between* communicative events. Based on these findings, this study suggests that more research should look into how communication shapes PM development and PM effects.

[Paper one ends here. References appear at the end of this thesis]

8.2. Paper 2

Organizing innovation in a pharmaceutical company: Conversations between control objects and work objects

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Abstract

Based on a study of the organization of innovation in a global pharmaceutical company, this article shows how the organization of innovation can be seen as constituted through interactions between elements of performance management (PM) systems and elements of laboratory work. We coin the notions of control objects and work objects in order to better conceptualize particular types of objects in innovation, and a communicative approach allows us to describe how these objects interact with one another. Whereas extant literature suggests that objects act as coordination tools in innovation processes, this article goes further to argue that the 'conversations' between a broad range of objects constitute the organization of innovation. This article develops an interdisciplinary theoretical framework, drawing on the Communication as Constitutive of Organization perspective, management accounting studies and Science and Technology Studies. This approach allows us to capture how both control objects and work objects can have multiple effects, and may produce both control and uncontrollability.

Keywords: *Performance management, innovation, Communication as Constitutive of Organization (CCO), work objects, control objects*

1.0. Introduction

Fostering 'innovation' through the organization of knowledge work is often considered a necessity for the production of value in organizations. As such, innovation often refers to the pursuit of new concepts and dimensions through rational exploitations and pre-conceived patterns that are intended to achieve specific goals (Hellström, 2004, pp. 631–32). In organization studies, processes of innovation have been studied empirically (e.g. Adler, 2005; Blackler, Crump, & McDonald, 1999; O'Shea, 2002; Steward & Conway, 1998; Sturdy, Clark, Fincham, & Handley, 2009), and this has engendered discussions about the organizational complexities of pursuing goals through innovation. The present article agrees that important lessons can be learned from studying innovation in practice and particularly focuses on the organizing roles of objects in the context of innovation. Thereby, it adds to the literature within organization studies (e.g. Ewenstein & Whyte, 2009; Nicolini, Mengis, & Swan, 2012; Scarbrough & Nandhakumar, 2015; Swan, Bresnen, Newell, & Robertson, 2007) that is concerned with the role of both physical and abstract *objects* in innovation. In this literature, it has been pointed out that 'relations between objects' have stabilizing effects on innovation (Scarbrough et al., 2015), that objects have 'unfolding ontolog[ies]' (Ewenstein & Whyte, 2009, p. 28), and that objects might motivate, constitute and allow individuals to work across different types of boundaries (Nicolini et al., 2012). With a similar interest in objects, this article coins the concepts of *control objects* and *work objects*, and argues that the interaction between these objects are constitutive of the organization of innovation.

This argument builds on a study of the organization of innovation in a global pharmaceutical company, where we followed a group of scientists' yearlong pursuit of finding a cure for diabetes via stem cell research. We witnessed how scientists tinkered with stem cells in the laboratory, how they collaborated, how scientists and managers related to the goals articulated through Performance Management (PM) systems, and how they conceptualized their hopes and struggles in order to

reach these goals. By studying how PM systems mattered in organizing innovation, we observed a series of uncontrollable events and objects that shaped the processes of innovation as much as the goals defined by the PM system did. This led to the creation of an analytical framework aimed at capturing the interaction between PM systems and activities in the laboratory.

The analytical framework is inspired by the so-called Communication as Constitutive of Organization (CCO) perspective (Ashcraft et al., 2009; F. Cooren et al., 2011; Kuhn, 2012). This perspective allows us to study control objects and work objects as types of text that take part in a conversation over time, thereby constituting the organization of innovation. The analysis of such communicative interactions is qualified through reference to the domains of management accounting studies and Science and Technology Studies (STS). The former offers perspectives on organizational control technologies, and the latter inspires a focus on some of the activities and instruments in the laboratory that are central to the empirical case. Rather than assuming a conflict between (management) control and (employee) freedom, the intention is to establish an open theoretical framework to interrogate the agencies and interplay of control objects and work objects.

The study contributes to the literature in organization theory that studies the roles of different types of objects in the coordination of processes of innovation (Scarbrough et al. 2015; Ewenstein & Whyte, 2009; Nicolini et al., 2012). Rather than only focusing on how objects afford collaboration, our intention is to include other types of objects in the analysis, namely, mundane objects of everyday work and objects of managerial intervention. Some of these also serve as coordination tools, but we wish to broaden the scope of the analysis to capture various other organizational functions or effects of objects. For instance, we show how objects create motivation in a way that compensates for pressure, how they hinder progress, how they provoke adjustments of goals, and

how they influence daily decisions. On an empirical level, the study thus enhances our understanding of the organization of innovation, in particular the contingent effects of a range of objects that are not necessarily coordination tools. On a theoretical level, this article develops a communicative perspective on the organization of innovation, offering an understanding of how control objects and work objects are important elements in the constitution of innovation processes through their ongoing conversations. As such, it contributes to the literature in organization theory that studies communication as constitutive of organization, the so-called CCO perspective (Cooren et al., 2011; Kuhn, 2012; Ashcraft, 2009). It aims to develop CCO's analytical construct, the 'text-conversation' dialectic, by drawing on the two domain literatures mentioned above, and by empirically showing the multiple effects the same text may have, depending on the conversation they are part of.

The article is structured as follows: The next section introduces our research question and our interdisciplinary framework, which draws upon management accounting studies, Science and Technology Studies and CCO thinking. Hereafter, the research setting is introduced with a particular emphasis on the kind of innovation taking place in the multinational pharmaceutical company we study; in this case, stem cell research. This is followed by our description of how the case was constructed. A method section elaborates on how the empirical material has been produced through qualitative research methods, and how the material has been analysed in an abductive manner. Subsequently, the analysis illustrates how interactions between various PM system elements and laboratory elements can be seen as conversations that constitute processes of innovation. This leads to a discussion of the difficulty of establishing controllability as an element in the organization of innovation. The innovation process can be seen as a constant struggle with controlling work progress, controlling cells and equipment, and compensating for certain effects of

the control tools. This again leads us to suggest that PM systems do not just produce control, but also uncontrollability – just as innovation does. In the conclusion, we argue that our interdisciplinary framework is particularly suited for studying the complex interplay between PM systems and laboratory work in innovation processes. Furthermore, we argue that the broad text concept applied here focuses the attention to otherwise neglected dynamic interactions between, for instance, visualizations, milestones, cells and ventilation systems, which constitute organizing communicatively. The study contributes to practice by teasing out some of the challenges that organizations might face while using PM systems to manage processes of innovation.

2.0. Theoretical framework: a communicative perspective on the organization of innovation

The interdisciplinary theoretical framework developed in this article draws on management accounting studies, Science and Technology Studies (STS) and CCO. Management accounting studies rarely account for the ways in which scientific and technological objects influence the organization of innovation. By contrast, laboratory studies have examined the agencies of these objects but have hitherto failed to address how PM technologies impact processes of innovation. By drawing inspiration from both traditions, we address these blind spots and touch upon issues that would be relevant to further theoretical investigations within both the management accounting and the STS literatures. However, the framework mainly draws on CCO's 'text-conversation' dynamic, which allows us to examine how the above-mentioned objects interact. The theoretical framework is hence constructed to address the following research question: *How do performance measurement elements and laboratory matters interact, and how do such interactions challenge the organization of innovation?*

Below, we present the concepts of control objects and work objects as analytical constructs leading our attention in particular directions. Posing the above questions, but choosing to articulate an

object focus, we align ourselves with authors suggesting that the exploration of objects is of particular significance for organization studies, because it focuses our attention on the organization's work, while teasing out neglected issues that are important for practice (Engeström & Blackler, 2005, p. 327).

2.1. Control objects – the inspiration from management accounting studies

Management accounting studies have focused on understanding accounting practices such as PM systems as social and organizational practices (Chapman, Cooper, & Miller, 2009). One of the tradition's classic terms is the so-called 'controllability principle' (Antle & Demski, 1988; Arya, Glover, & Radhakrishnan, 2007; Fisher, 2010; Merchant, 1987), the normative idea that individuals should only be held accountable for factors within their control when being evaluated by PM systems. In uncertain environments, however, controllability might be hard to achieve; it is difficult to predefine what is important, and it is difficult to come up with evaluations that represent the quality of individual performances. Numerous studies of the so-called 'innovation-control intersection' (Davila et al., 2009, p. 301) have focused on PM systems in such settings. Most of these studies, however, assume that management control technologies are needed as input to optimize innovation outputs (Bisbe & Otley, 2004; Damanpour, 1991; Davila, 2000; Leonard-Barton, 1995; Simons, 1995; Tidd, Bessant, & Pavitt, 1997), while other studies have described how management control technologies hamper innovation and creative thinking (Abernethy & Brownell, 1997; Abernethy & Stoelwinder, 1991; Amabile, 1996), at least when 'tight' control is applied (Tushman, Smith, Chapman, Westerman, & Reilly, 2010).

By contrast, we make three assumptions: that control technologies have multiple effects (Revellino & Mouritsen, 2009, 2013), that they are in conversation with other empirical elements, and that they get agency through their relations. As noted by Revellino and Mouritsen, there are multiple

relations between control and innovation, but these relations change from time to time (Revellino & Mouritsen, 2009, p. 360). In addition, control systems do not work as passive technologies. They are used as references for dialogue, and they mediate between technologies and the networks in which they appear, sometimes in surprising and problematic ways (ibid.). With this study, we intend to investigate in detail the constitutive role of PM systems in innovation (Akrich, Callon, & Latour, 2002; Miller & O'Leary, 1987; Mouritsen et al., 2009; Revellino & Mouritsen, 2009). Inspired by the innovation-control literature, we have coined the concept of 'control object'. A control object is an analytical construct intended to be very open; it can be any kind of item that actors use to gain control over an innovation process. It could also be laboratory equipment used to control experiments, but we have chosen another term for such objects in the following analysis. To account for other significant types of empirical elements that enter the conversation as innovation is organized, we have found it fruitful to turn to STS, a tradition that has enriched organization and management studies' increasing interest in the role of materiality in organizing.

2.2. Work objects – the inspiration from laboratory studies

Laboratory studies, a subfield of STS, is particularly helpful in directing our attention to relevant empirical phenomena that are constitutive of innovation processes in a pharma setting – for instance, cells, laboratory equipment, etc. Laboratory studies have documented how technologies are developed to help master nature, how materials resist experimentation and testing (Latour, 2000), and how scientists 'tinker' with the material (Pickering, 1995). 'Tinkering' can be understood as the practices of working with materials in order to investigate a specific scientific goal. In Pickering's (1986) defense of the sociology of scientific knowledge, he defines one of the field's primary tasks as studying how materiality, conceptual models and articulations constitute science. The idea of tinkering with materials, conceptual models and articulations have inspired the coining of the concept of 'work object'. As is the case with 'control objects', this is an open

analytical construct, pointing to the fact that the daily work with innovation processes demands the construction of, and interaction with, a range of devices; in our case, microscopes, visualizations, ventilators and other types of devices. And just as 'control objects' need not only be managerial tools, 'work objects' need not only be employees' equipment but can also be devices that managers use. The difference between the two concepts is best understood with reference to their origins in different literatures and the types of empirical objects they alert us to; the inspiration from management accounting studies leads us to focus on particular elements of the organization of innovation, whereas the inspiration from STS points us in other directions. One could argue that the study of both types of elements is crucial in understanding the organization of innovation, and that each literature would be enriched by the empirical focus of the other. This study brings them together through the text/conversation analytics described in the following.

2.3. Text/conversation – a communicative perspective on organizing

As indicated above, the theoretical framework is intended to advance our understanding of how the organization of innovation can be understood as communicative accomplishments, constituted through interactions between organizational actors (i.e. research managers, scientists, and management consultants), control objects (i.e. PM systems), and work objects (i.e. laboratory equipment, biological elements). The following paragraphs introduce some of the key concepts of CCO that are used to account for the dynamic interaction between these actors and objects.

Growing out of the field of organizational communication, the CCO perspective combines communication and organization theory to conceptualize that which makes up organizing and organizations. From this perspective, 'organizing' is 'a communicative activity' (Schoeneborn, 2011, p. 664), where communication is broadly defined as 'ongoing, situated, and embodied process[es]' that make up 'organizational existence and organizing phenomena' (Ashcraft et al.,

2009, p. 26). With this definition of communication, it is recognized that humans are not the only ones able to act communicatively (Ashcraft et al., 2009, p. 35; F. Cooren et al., 2011, p. 1163). Objects, in this case PM systems and biological cells, can also be considered agents in the communicative events that organize innovation. The principle of symmetry (Latour, 1996) informing some CCO thinking is inspired by Actor-Network Theory (ANT), and CCO has even been called a 'discursive elaboration' of ANT (Fairhurst & Cooren, 2009, p. 470). A symmetrical approach implies that both human actors and material objects should be considered relevant analytical entities. The symmetrical aspect of CCO is central to our analytical approach, which is driven by an interest in how a broad range of materialities, for instance, the abovementioned laboratory technologies and PM systems, relate to other elements and shape organizing.

As indicated, CCO scholarship operates with a broad definition of 'text' (Cooren et al., 2011), and organizing is understood as 'conversations between texts' (Ashcraft et al., 2009, p. 20; F. Cooren, 2006; Kuhn, 2012; Taylor & Robichaud, 2004; Taylor, 1999). To understand the interplay between PM systems and elements of laboratory work, the communication perspective allows us to see such elements as 'texts' that become part of a 'conversation' constituting the organization of innovation. The broad text concept potentially includes all kinds of elements in organizing processes, such as combinations of words, visual representations and technological artefacts – which have also been theorized as texts in STS. Here, Pinch and Bijker have called technological artefacts social constructions with interpretive flexibility (Pinch & Bijker, 1984). Another study has similarly drawn the technology-as-text idea into a CCO framework (Cresswell, 2012).

By adopting the text/conversation dialectic, we are able to describe how, for example, talk, visualisations and biological elements shape organizing. The idea of seeing organizing as

conversations between texts offers an opportunity to integrate some of the insights provided by the literature on PM systems with laboratory studies' insights into how materiality shapes innovation. We propose to understand control objects and work objects as the texts that are part of the 'conversation-text' dialectic constituting innovation. The article's contribution to CCO is hence its elaboration of the text concept. The empirical study of the organization of innovation demonstrates how control objects and work objects are significant texts entering the conversation in such an organizational setting. We argue that when understanding different empirical phenomena, it is worthwhile to be specific about the types of texts that are likely to get agency through their relations, and this sensitivity should be established through the creation of interdisciplinary frameworks that draw on relevant literatures.

To sum up, the CCO perspective enables us to account for the always-evolving interplay between patterns of talk, laboratory matters and PM systems as conversations between texts. This allows us to conceptualize the organization of innovation as the outcome of these conversations. In the following, we describe the particular organizational setting that led to the creation of the above-described framework, and we describe the construction of the case and the set of methods used in the collection of the empirical material and in the analysis.

3.0. Empirical foundation and methods

BioTech (a pseudonym) is a global pharmaceutical company that employs more than 35,000 people and has annual revenues exceeding 10 billion USD. The organization continues to have great global success with its sales of medical drugs for diabetes treatment. However, for several years, top management has emphasized the importance of developing the product pipeline and here 'the R&D organization is key to secure such a product pipeline' (as expressed by one of the Senior Vice Presidents, 2014). To ensure future success, BioTech invests heavily in its research areas, which

employ around 3,000 people. They are primarily highly qualified scientists in the fields of biology and chemistry, almost half of them holding a PhD degree. The two main purposes of the research organization are 1) to search for new products for the R&D pipeline, and 2) to improve existing products in the majority of research departments. The study presented here is a case study of scientists trying to invent a new product, which would have massive implications for the diabetes medicine market: a cure for diabetes via stem cell research. The research department studied is called the Stem Cell Research (SCR) department. It employs approximately 15 scientists and is organizationally situated in BioTech's largest research unit, the Protein Research Unit (PRU). Our interest in the organization's management accounting systems and the ways they work came about in the course of a long engagement with the case organization, where one of the authors was formally employed during the project period.16 The following section details how the case was constructed and analysed.

This study is a qualitative single case study that draws on three kinds of empirical data: interviews, observations and documents, all of which were produced over a rather long period of time (between May 2012 and May 2014). The data are part of a larger project that explores the intersections between PM and innovation in the case-organization.[17] The author's affiliation has facilitated an almost unconstrained access to data. The analysis of this article is based on 35 semi-structured interviews[18] (see Table 1 below), primarily with scientists and research managers in different

[16] From 1 May 2012 to 30 April 2015, the first author was employed by one of the Corporate HR departments specialized in PM, the 'Global Performance' department, to do research within the mentioned areas.

[17] The empirical data of the entire research project include 48 interviews, field-notes taken during the attendance of several events, 13 full days of observations during the period mentioned, as well as several hundred documents that describe the development and use of the organization's PM system.

[18] All of them recorded, 40 of them professionally transcribed (46,2 hours of recordings in total). The interviews have an average duration of one hour.

research departments in BioTech's PRU division. However, interviews have also been conducted with corporate and local HR strategists. All interviewees were promised full anonymity, which was also highlighted by several interviewees as highly important due to their sometimes-controversial utterances.

This study focuses on how processes of innovation unfolded in one specific area of PRU, the so-called Stem Cell Research (SCR) department. Over an intensive two-week period (between 16 June and 27 June 2013) one of the authors was present at the department, followed work activities in the laboratories, conducted interviews and studied documents. In sum, seven in-depth interviews were conducted there.[19] Besides our involvement with the SCR department, the theoretical and empirical inquiries around the communicative aspects of organizing innovation draw upon interviews (n=20) gathered in five other research departments in PRU and interviews (n=11) with HR personnel in Corporate HR and in the research areas. These interviews touched upon general aspects of how PM processes affected the work performance in R&D as well as how the PM systems were designed, communicated and so on.

We would generally characterize our strategy for conducting the interviews as 'analytical' and 'exploratory' (Kreiner & Mouritsen, 2005), as we asked open questions intended to explore the possible dilemmas constructed by the interviewees on the subjects of, for instance, PM and innovation. As a consequence of this way of understanding the interview process, we also understand our interview data as being constructions based on our conversations with the interviewees. For instance, we sought to allow the interviewees to 'give input to the analytical conversation', and in our later analysis of the data we tried not to regard their answers as being

[19] One of the interviews was a group interview (reference: in group) with the scientists, and the six other interviews were individual interviews with two research managers and four scientists.

'final' or 'privileged' (ibid., p. 155). Instead, it has been our ambition to use the interview data reflexively, meaning that they have been studied in conversation with other sources of data, primarily observations made in the field. The table below provides an overview of the interviews.

Area of the organization and interview *Ref-tag*	**Employee position** (9 research managers, 18 scientists, and 12 HR consultants)	**Date of interview** (from June 2012 to September 2014)	**Length of recording/ transcribed**	**Interview number** If part of Pilot study = (P)
Protein Research Unit, sub-department 1, *ResMan1*	Research manager (manager)	07/06/12	1 hour and 4 minutes, transcribed	1 (P)
Protein Research Unit (PRU), sub-department 1, *Res1*	Scientist (Not manager)	07/06/12	1 hour and 2 minutes, transcribed	2 (P)
PRU, sub-department 1, *Res2*	Scientist (Not manager)	07/06/12	1 hour and 2 minutes, transcribed	3 (P)
PRU, sub-department 2, *Res3*	Scientist (Not manager)	15/06/12	50 minutes, transcribed, notes taken	4 (P)
PRU, sub-department 2, *ResMan2*	Research manager (manager)	15/06/12	1 hour, transcribed	5
Corporate HR, *CorpHR 1*	HR manager (manager)	16/05/12	N/A, not transcribed or recorded	6
Corporate HR, *CorpHR 2*	HR manager (manager)	18/05/12	1 hour and 1 minute, notes taken	7
PRU, sub-department 2, *ResMan3*	Research manager (manager)	20/06/12	58 minutes, transcribed	8
PRU, sub-department 2, *Res4*	Scientist (not manager)	20/06/12	52 minutes, transcribed	9 (P)
PRU, sub-department 2, *Res5*	Scientist (not manager)	20/06/12	36 minutes, transcribed	10 (P)
PRU, sub-department 3,	Research manager	21/06/12	49 minutes, transcribed	11 (P)

ResMan4	(manager)			
PRU, sub-department 3, *Res6*	Scientist (not manager)	21/06/12	52 minutes, transcribed	12 (P)
PRU, sub-department 3, *Res7*	Scientist (not manager)	21/06/12	49 minutes, transcribed	13 (P)
PRU, sub-department 4, *Res8*	Scientist (not manager)	21/06/12	41 minutes, transcribed	14 (P)
PRU, sub-department 4, *ResMan5*	Research manager (manager)	29/06/12	51 minutes, transcribed	15 (P)
PRU, sub-department 4, *Res9*	Scientist (not manager)	29/06/12	51 minutes, transcribed	16 (P)
PRU, sub-department 4, *Res10*	Scientist (not manager)	29/06/12	56 minutes, transcribed	17 (P)
PRU, *PRU HR Partner 1*	HR Partner	08/01/13	57 minutes, transcribed	18
PRU, sub-department 5 (SCR dept.), *ResMan6*	Research manager (manager)	17/01/13	44 minutes, transcribed	19
Corporate HR, *CorpHR 4*	HR Manager	06/02/13	59 minutes, transcribed	20
Protein Research *PRU HR Partner 3*	HR Partner	11/02/13	57 minutes, transcribed	21
PRU, sub-department 5 (SCR dept.), *ResMan7*	Research manager (manager)	17/06/13	49 minutes, transcribed	22
PRU, sub-department 5 (SCR dept.), *Res14*	Scientist (not manager)	18/06/13	46 minutes, transcribed	23
Protein Research Unit, sub-department 5 (SCR department), *Res11*	Scientist (not manager)	24/06/13	42 minutes, transcribed	24
Protein Research Unit, sub-department 5 (SCR department), *Res12*	Scientist (not manager)	24/06/13	53 minutes, transcribed	25
Protein Research Unit, sub-department 5 (SCR	Scientist (not manager)	26/06/13	1 hour and 13 minutes, transcribed	26

department), *Res13*				
Protein Research Unit, sub-department 5 (SCR dept.), *ResMan7*	Research manager (manager)	26/06/13	46 minutes, transcribed	27
PRU, sub-department 5 (SCR dept.), *Group int.*	Group interview with three scientists; Res11-13	28/06/13	1 hour and 23 minutes, transcribed	28
Corporate HR, *CorpHR 7*	HR consultant	01/08/13	43 minutes, transcribed	29
Corporate HR, *CorpHR 3*	HR consultant	20/08/13	1 hour 23 minutes, transcribed	30
Corporate HR, *CorpHR 10*	HR consultant	07/11/13	40 minutes, transcribed	31
Corporate HR, *Corp. HR Group int.*	Group interview with HR consultants	08/11/13	53 minutes, transcribed	32
PRU, *PRU HR Partner 2*	HR Partner	29/01/14	45 minutes, transcribed	33
PRU, sub-department 5 (SCR dept.), *ResMan7*	Research manager (manager)	30/01/14	48 minutes, transcribed	34
Corporate HR, Group int. 2	Group interview with HR consultants	07/02/14	28 minutes, transcribed	35

Table 1. An overview of the 35 interviews that have influenced the writing of this article.

In order to focus the observations, as well as to gain 'natural access' to the field, we conducted person-based 'shadowing' sequences (Czarniawska, 2007) of five senior scientists of the SCR department, including the research manager. These interventions each lasted one full day on average (two days in the case of the research manager), and gave us access to many types of interactions in which the scientists engaged, for example, in meetings, the laboratory, or while they prepared their work. While gathering this comprehensive data set, we sensed that our long-term affiliation with the case-organization, as well as our familiarity with BioTech's basic work terminologies, helped us become accepted by the interviewees. The shadowing activities in the SCR

department also came to play an important role by enabling us to formulate relevant and specific questions in the following interviews. Here, scientists were frequently asked to explain the rationale of their practice in detail based on our prior observations. In addition, we realized how the writing of this article relied heavily on our ongoing contact with the SCR department manager (ResMan7) after our stay at the SCR department was completed. We had two follow up meetings with the manager, and they had a significant impact on our framing (and writing) of the case.[20] One implication of this is that an elaborate open coding in NVivo became less important to the analytical narrative than did the actors' accounts and interlinking of the objects of analysis.

4.0. Analysis: The interaction between control objects and work objects

Drawing on the theoretical framework presented above, this analysis shows how various objects in conversations co-constitute the organization of innovation in BioTech's Stem Cell Research (SCR) department. As argued earlier, we have drawn on the laboratory studies and management accounting literatures to become analytically sensitive to two types of objects that we establish as central to the understanding of the organization of innovation, and hence the analysis of the empirical material: *work objects* and *control objects.* This analysis is structured in two parts, each describing a set of work objects and control objects. Not only do we illustrate the ways in which these objects are interpreted by organizational actors, but we also discuss how they have constitutive effects on innovation as they interact with other objects. As indicated earlier, the objects are understood as particular types of texts that take part in conversations, thereby establishing a particular type of innovation process. In this way of looking at the organization of innovation, the effects of different elements are not given á priori. Instead, both control objects and work objects may produce both controllability and uncontrollability.

[20] These meetings took place on 29 August 2013 and on 31 January 2014.

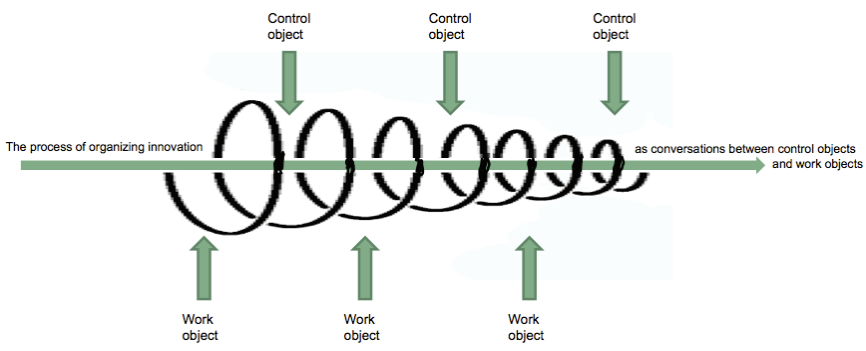

Figure 1. The organization of innovation. The model visualizes the idea that control objects and work objects are engaged in ongoing conversations, and thereby co-constitute the organization of innovation.

4.1. Work objects

This first part of the analysis discusses three work objects: a scientific visualization, cells and compounds, and a ventilation system; the types of objects laboratory studies have inspired us to examine more closely. Scholars in the tradition of activity theory have talked about 'objects of work', by which they mean objects that provide meaning and direction for activities (Kaptelinin & Nardi, 2006). While we agree that objects do so, our concept is also intended to capture mundane and silent objects that emerge as constitutive elements in innovation processes.

Each of the following sections touches upon how work objects interact with each other and how they interact with control objects, but the co-constitutive role of control objects is not fleshed out before the second part of the analysis.

4.1.1. A scientific visualization as work object

At the time of our visit to the Stem Cell Research (SCR) department, its scientists had spent the previous five years developing technologies aimed at configuring human stem cells in ways that seem promising with regards to effectively curing diabetes in the distant future. One research

manager led the SCR department[21], and the department employed seven senior scientists (chemists and biologists), one post-doc graduate[22], and six laboratory technicians. Briefly put, the research team worked on 'differentiating' (or re-configuring) human embryonic stem cells derived from frozen, fertilized, donated eggs. The work object we have chosen to highlight in this regard is a visualization of the research agenda (see Figure 2 below) developed by, and shared among, the scientists of the department. It illustrates the scientific vision, as well as the expected stages, the research needs to pass through, where cells are developed from the so-called 'stage of the definitive endoderm' (stage B) into 'active beta cells' capable of producing human insulin (stage E). If such cells could one day be successfully transplanted into human tissue and produce insulin in the right amounts when stimulated by glucose, the vision is that a cure for diabetes would be within reach. Such visualizations have been theorized as instantiations of epistemic objects (Ewenstein & Whyte 2009). An epistemic object embodies what we do not yet know, and may drive collaborative knowledge development (Rheinberger, 1997). This is indeed the case in the SCR department.

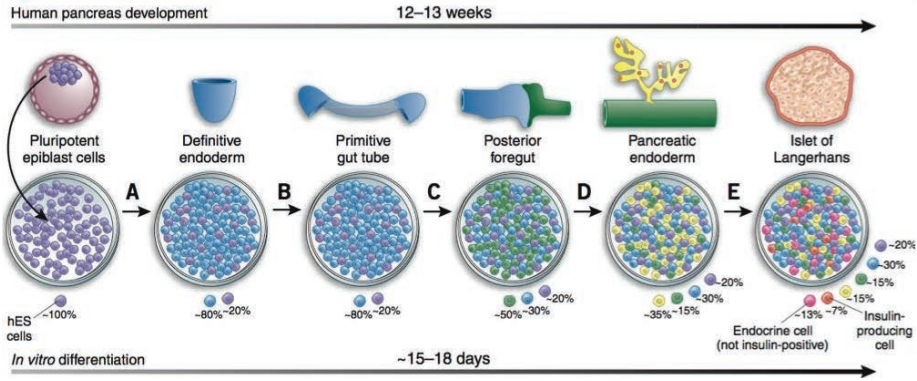

Figure 2. Conceptual model that illustrates the process of differentiating human stem cells into active beta cells.

[21] ResMan7, who refers to PRU senior management, which includes ResMan6

[22] E.g. Res11, Res12, Res13, Res14 and Res15.

In the first instance, organizational actors interpret such a visualization as an ambitious scientific vision. As emphasized by a senior manager in this area, success with the project would be extraordinary:

> 'You can say that this thing about regeneration and 'the cure for diabetes', that's the main... one can say that it's the overall vision. If it's possible to cure diabetes, we need to be there. And this area has also had incredibly high attention from doctors, etc.' (ResMan6, PRU)

Based on the interviews with SCR scientists and our observations, it was clear that the model worked as an object that, based on its theoretical illustration of the potential of the future, helped the scientists share their vision and enthusiasm related to an uncertain work task. To date, no company or research organization has ever been successful in producing an active beta cell ready for transplantation into living material. From this perspective, the scientists' expressions of confidence and motivation were striking. Throughout the interviews, material scientists articulated how they felt like pioneers who were in a unique situation within BioTech, which allowed them to work in a brand new and untouched area (Res12, SCR dept., group). The scientists talked about a pioneering spirit (Res12, Res13, SCR dept.) that was partly constituted and driven by science (Res13, SCR dept.). They also expressed that their interest in making a difference in the long run (Res13, SCR dept., in group) motivated their work. The scientists repeatedly emphasized how the potential for developing their technology is huge (Res14, SCR dept.), but they also emphasized that the work was highly challenging due to the novelty and sparseness of pre-existing knowledge in the area (Res11, SCR dept.).

4.1.2. The scientific visualization as a text in conversation with other texts

The scientific visualization has to be seen as related to other texts in order to understand its constitutive effects in innovation processes. As we will see in the next section, the model had

practical implications for interactions with work objects in the lab, i.e. how it was meaningful to work with cells. However, it was also an important coordination and communication tool. The scientists repeatedly emphasized the importance of having a common ground when they went about their tasks. To become successful, the SCR research team had to differentiate their cell cultures into so-called Stage E, where the 'active beta cell' produces insulin (Figure 2). This effectively meant that the team was held accountable for delivering an active beta cell ready for transplantation into mice.

Theoretical models, such as the one shown above (Figure 2), were often included in the scientists' planning and evaluations of their work processes. The model also affected their talk in a very literal sense: We often heard scientists talk about various 'stages' of the cells' differentiation processes. Therefore, the model both worked as a theoretical foundation for the scientists' work and seemed to provide some foundation for evaluating and controlling the work that had already been done:

> 'We like these [models] … Yeah, at the old laboratory we called it a 'skills diagram' […].We have made a lot of sub-points and from there we say 'OK', now we push the stem cell from here, and then further, and further, and further. And then check for proteins […] and as we move along we can measure […] how effective we are.' (Res14, SCR dept.)

Thus, we witnessed how this type of model acted as a work object communicating the possibility of a future scientific breakthrough, and the scientists often integrated them into their talk and actions related to their treatment of the cell cultures. Hence, the models seemed to act as 'visual representation[s]' (Quattrone, 2009a, p. 87) of the scientists' success in tinkering with the cells, which was otherwise characterized by great uncertainty.

The model was not only in conversation with other work objects but also with control objects. As is shown in greater detail in the section on control objects, the department's so-called milestone is

based on the vision inscribed into this scientific visualization, and the scientists' individual PM forms are based on both of these texts (the vision and the scientific visualization). When asked to relate to these texts, the scientists emphasized that they were driven more by a higher goal than they were by their PM forms. Specifically, they maintained that their motivations were guided by science and the noble cause of finding a cure for a chronic disease:

> '[I] am not driven by my PM in that respect. The PM actively contributes with defining where I focus my time, and where I know that I have the primary responsibility. But what drives me is the fact that the project has to become a success […]. [W]e are driven by science and the fact that we try to do something which no one else has ever been successful doing before. So that is what drives us, and therefore I feel that we have this open way of sharing knowledge.' (Res13, SCR dept.)

Scientists explained that they worked in a department with a clear scientific vision, and that they could share aspirations to reach common goals. They talked about the department as a special place in the organization and maintained that they felt fortunate in that they were able to avoid certain situations faced by many other departments in BioTech (Res12, SCR dept., in group). This was possible because the SCR department was not subjected to project matrix structures – BioTech's usual manner of organizing research.

We interpret the above as a set of statements on the relations between different types of text: Both scientific visualizations and PM forms have constitutive effects on innovation, and scientists relate to both of them, although in different ways depending on various organizational dynamics.

4.1.3. Cells and compounds as work objects

If we view the scientific visualization as a text that is co-constitutive of an ongoing organizational conversation such as an innovation process, then the same can be said for work objects like cells and compounds. In the laboratory, scientists relate to the scientific visualization, but they also engage with laboratory equipment to tinker with biological material. The scientists used so-called

'compounds'23 to differentiate the cells, meaning that the cells were manipulated into having new configurations. If, for instance, the cells appeared to be 'square shaped' instead of 'round shaped', this would prove that the correct protein lives in the cell culture. In the pictures below, one can see the scientists tinkering with the cells; the ways in which a medium24 is prepared in order to 'nurse' the cells, and how the cells are studied by a laboratory technician to identify whether they have developed as suggested by the scientists' models and protocols.

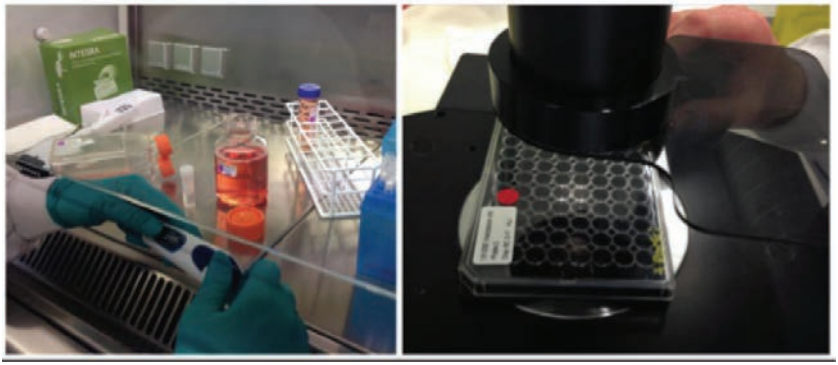

Figure 3. Cells are washed in a medium at a 'LAF bench' (the environment to the left), and cells in wells are eyed through a microscope to track their growth in different compounds.

The pictures illustrate a range of work objects used and developed by the scientists, including biological material, stem cells, apparatuses, and protocols. The scientists tinkered with the cells, or 'pragmatically adjusted' the environment around them, to achieve 'self-consistency between the events taking place in the material world, and the articulation and understanding of those events'

[23] Compounds are chemical substances that consist of two or more elements, such as H_2O. To identify progress, according to the protocols, the scientists need to detect the presence of the 'right' proteins in the cell cultures. Therefore, in order to judge the outcome of their efforts, the scientists are required to examine several thousand different compounds, testing whether the right proteins are represented.

[24] A 'medium' is a special liquid that removes dead cells.

(Pickering, 1986, p. 198). The scientists' experimentations with adjusting the configurations of the compounds, their concentrations, and their combinations, related to the scientific model shown earlier (Figure 2) and other conceptual texts. However, upon examining scientists' interpretations of the role of the cells and compounds in the innovation process, it became apparent that the scientists' tinkering did not deliver the hoped-for results, and some frustration was evident amongst the research team when the cells did not simply grow according to the descriptions of the research protocol. The scientists tried to examine whether any unknown factors had affected their results. For instance, the team tried to grow the cells in different environments, wash the cells more frequently, and test their equipment for malfunctions. Due to the poor quality of the results, the scientists realized that they were required to destroy their harvested cell cultures on a regular basis:

> 'When we throw sugar on [the cells], we expect them to produce insulin, but they don't really do that. There are no actual […] proteins or indicators for that area […], and this is why we're a little bit under pressure. Earlier, we knew that 'these are the indicators', but now we cannot find an indicator for the final goal.' (Res14)

4.1.4. Cells and Compounds as Texts in Conversation With Other Texts

Apart from relating closely to the scientific model, cells and compounds can also be understood as engaged in an ongoing conversation with the aforementioned milestone, and this may explain the scientists' frustration. For the scientists, the milestone was approaching fast and, as the milestone was not questioned, time was about to run out for the project. Consequently, there was little room to investigate why the cells failed to survive. Despite the research team's preference for assessing the reasons why their results failed to match their models and protocols, they explained that the impending milestone forced them to push their studies forward in order to ensure their chances of reaching it in time. Upon the conclusion of our observations at the department, hopes remained high as the scientists had just sowed a new round of cells and organized who would visit the department during their vacation – a period during which the cells would need nursing. However, because the

cells needed time to grow, it would take months before the team would be able to check this round for the right characteristics. This part of the case illustrates the obvious point that different work objects and control objects interact and have different constitutive effects in relation to the organization of innovation. For instance, a scientific visualization both produces hope and ideas for experimentation, as well as feeding into PM milestones. The text/conversation approach allows us to study controllability in a more dynamic fashion than would a more dichotomous approach to innovation and management control systems. In a sense, the milestone is dependent upon the conversation with the scientific visualization to establish control measures. By looking at a less obvious work object, the last part of this section will emphasize the difficulty of establishing control through formal control systems.

4.1.5. The ventilation system as work object

The team had moved into a new site and had been surrounded by new – but initially silent – work objects. As the research manager described it:

> **Research manager 7: '**When we moved out here in May last year, it all worked fine for the first couple of weeks, but then things started to go wrong. The cells couldn't grow as they were supposed to. They didn't consolidate properly when you grew them in different flasks and stuff like that. And it just went on and on and on. We couldn't find out what… and then we started to systematically look at all the parameters.'
>
> **Interviewer:** 'You tried with 3D suspension and…'
>
> **Research manager 7:** 'Exactly, and we tried to grow the cells in different rooms etc., to check if there was a difference… At last we could conclude that it had something to do with the ventilation.'

The artificial ventilation system of the new laboratory (shown on the left below) had been adjusted incorrectly, which created a low pressure (ResMan7) in the room, instead of the required high

pressure.[25] As a consequence, when the incubators storing the cells (shown on the right below) were opened, everything contained within was sucked out.

Figure 4. The ventilation system in the laboratories (left) created a low pressure, which sucked the stem cells out from the incubator as it was opened (the incubator is shown on the right).

Along with the ventilation system, another important element was that in order to compensate for the poor ventilation (ResMan7) caused by low room pressure, the scientists were forced to turn up the LAF-benches to maximum (ResMan7). In sum, this network of material elements or 'infrastructural arrangements' (Nicolini et al., 2012) or 'boring things' (Star, 1999) seriously challenged the growth and differentiation of the cells, which increased the risk of infections. This explained the bad condition of many of the surviving cell cultures. As explained by the research manager, the consequences of the low pressure were dramatic; approximately six months of work had been lost and hundreds of experiments had to be started over.

[25] The incubators were set-up to handle 'ideal environments' characterized by high pressure and to maintain 5 pct. CO_2 in their storage, but the levels of CO_2 dropped 3 pct. due to the low pressure in the laboratories.

> ‘When the cells are not able to stick or survive, we don’t have much to work with. So we could… In many of the experiments we made, we just looked at them and said, ‘No, there are no cells’, and we just had to throw them out and start over again.’ (ResMan7)

4.1.6. The Ventilation System as a Text in Conversation With Other Texts

Seen through the text/conversation lens, the ventilation system had been in conversation with the cells, which had had dramatic effects for the organization of innovation. A series of unsatisfying experiments had been produced and, in a sense, this raised questions about the scientific visualization discussed above. Thus, the hope of finding a possible cure for diabetes had been lowered. The research manager explained that when the cell cultures did not grow as planned, many team members became stressed and developed relatively short tempers (ResMan7, SCR dept.). According to the research manager, this was fully understandable given that the whole project was about to fail and all of their professional aspirations disappointed.

However, the ventilation system should not just be seen as a text in conversation with cells and scientific models. It was also in conversation with control objects, since it hindered the achievement of the milestone and had consequences for the PM system. Given that the ventilator is a type of silent or invisible work object, it was obviously not represented nor taken into account by the PM system and its deadlines. The following sections on control objects will elaborate more on the interactions between this type of work object, milestones and PP forms.

4.2.0. Control objects

This second part of the analysis discusses two control objects: the milestone and the PM form. These are the types of objects many management accounting studies have inspired us to examine. As in the first part of the analysis, each section touches upon how they interact with one another as well as how they interact with work objects. When combined with the first part of the analysis, this illustrates how the organization of innovation is constituted by the ongoing conversation between

such objects. Through the examination of this interaction, we advocate going beyond studying how objects 'enable control' (Rennstam, 2012), although we obviously agree that objects also perform this function.

4.2.1. The milestone as control object

The milestone is established by the organization as part of the governance structures around its research projects. Below is a Stage Gate Model – developed by one of BioTech's corporate staff functions – that maps these structures. Milestones (ranging from Milestone 0 (M0) to Milestone 12 (M12)) are used to identify ownership, funding and progress of the respective projects:

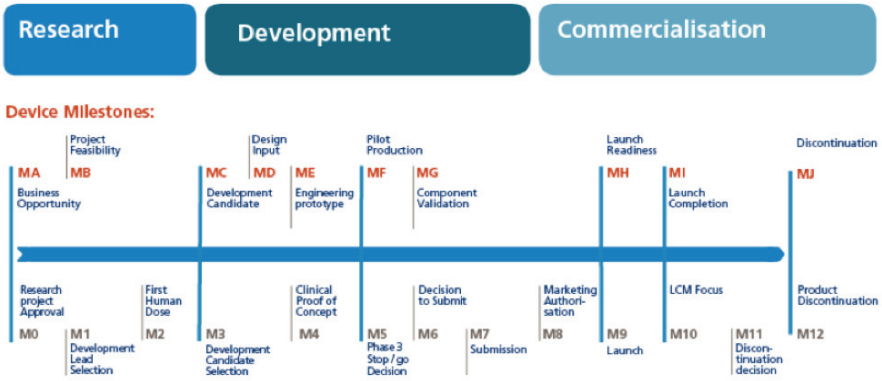

Figure 5. BioTech's overall Stage Gate model on product development.

The analysis above focused on the organization of innovation taking place before the M3 stage, an uncertain stage for research projects theoretically, practically, and financially. A central technology to help govern the stage gate model is the organization's Balanced Scorecard (BSC) (Kaplan & Norton, 1996). To operationalize BioTech's Balanced Scorecard, the organization's PM system, the so-called People Performance (PP) system, comes into play. The PP system translates the annual BSC goals into departmental and individual goals that are evaluated and appraised on an ongoing

basis. Hence, the two control objects are tightly connected. However, we have chosen to separate them analytically because the milestone was viewed as acting more in relation to the collective, whereas the PP system's PM forms appeared to have constitutive effects more on an individual level.

In the case we have analysed thus far, the scientists worked with a shared milestone, which made the team responsible for moving the cells from Stage D to E. It carried a weight of 30 per cent in the scientists' individual PP forms, hence a collective endeavour was inscribed here. The passage below, taken from a focus group interview with four senior scientists, exemplifies how the control object produced a mobilization of common efforts, and thereby directly influenced the scientists' coordination and tinkering with the cells:

> **Scientist 13:** 'There are so many things we could potentially start working on now, which we know will be necessary to address in the future […]. For instance, we could play some more with the 3D culture and things like that, right? But we simply don't have the time, because it isn't part of the specific goal at year-end, so nothing happens.'
>
> **Scientist 12:** 'But it would… actually be in our interest to start working on it now.'
>
> **Scientist 13:** 'Yes, yes, exactly. But [working on the 3D culture] would require that we postpone our milestone.'
>
> **Scientist 11:** 'Absolutely.'
>
> **Scientist 13:** 'And that is definitely not an option.'

The above passage indicates how the milestone intervenes in the organization of innovation by influencing the scientists' decisions regarding how to go about their work. The rationality of the milestone is described as being in opposition to a scientific rationality. Scientists explain how

certain tests could become extremely valuable if the project progressed to the next stage. However, based on the argument that the project will only survive and receive new funding if the immediate milestone is reached, the milestone becomes an important constitutive force governing what is tried and not tried in the laboratory.

At the same time, the case also shows that the milestone is not always the dominating text in conversation. If we return to the situation with the ventilation system, we observe that the SCR department manager (ResMan7) chose to present the ventilator as a legitimate force in the organization of innovation; something that needed to be taken into account by top management. He spoke of how he had no problem with applying for and extending the deadline for the milestone: 'It wasn't an argument that was hard to win' (ResMan7). That the development of the project had been beyond his control was not due to the scientific vision or the work of his employees, but rather the building simply not having the features that the team had expected (ResMan7). As a result, the SCR was granted a deadline extension of six months. The SCR research manager explained this by referring to the fact that those from top management were initially recruited from science and, as such, had greater insight into the complexities of practicing science (ResMan7). In fact, that top management understood how a ventilation system could produce a lack of controllability was described as one of the benefits of BioTech's research areas. Whereas other studies have described the coordinating role of milestones as enabling a temporal ordering of other objects (Scarbrough et al., 2015), this analysis points to the contingency of the milestone's effect.

The text/conversation dynamics alert us to the fact that the organizational conversation (with contributions from management, the PM system and the ventilator) led to a revision of the milestone. The control object was redefined, and the work object became co-constitutive of the

organization of innovation. Therefore, the milestone does not always act as a rigid text, but can also be flexibly adjusted to the demands of other texts. It is the basic premise of this finding that ascribing effects to control or work objects ex ante does not make sense; this analysis has shown an example of how their constitutive effects are established in conversations.

In the following section, we would like to extend the discussion of constitutive effects of control objects to the PM forms mentioned throughout the analysis. These are somewhat different to the milestone discussed here, as they are often intended to work on the individual level rather than the collective, and they are more rigidly written.

4.2.2. The PM form as control object

The organization's People Performance (PP) system operates with goals and evaluations that are inscribed into individual PM templates – the above-mentioned PP forms. They are designed as a medium that can transmit the formal communication related to goals and performance ratings for individuals. The PP system builds upon three mandatory annual activities, as shown in the figure below. During 'goal setting' managers and employees input goals into the PP form, at the 'mid-year review' the status of the goals is re-visited, and at the 'year-end appraisal' all individuals receive their annual performance ratings according to a five-point scale. These ratings – ranging from 'does not meet expectations' to 'outstanding' – relate to the size of the employee's annual cash bonus.

1 Dec.	28 Feb.	1. June		31 Aug.	1. Dec.		28 Feb.
Goal setting		**Mid-year review**			**Year-end appraisal**		
Step 1	**Step 2**	**Step 3**	**Step 4**	**Step 5**	**Step 6**	**Step 7**	**Step 8**
Employees create 3P form	Manager approves 3P form	Employee enters mid-year review	Manager enters mid-year review	Employee signs mid-year review	Employee enters year-end appraisal	Manager enters year-end appraisal	Employee signs year-end appraisal

Figure 6. An overview of BioTech's global PM process known as the "PP process".

The PP form is stored in the organization's IT system, where the manager and employee are required to establish the respective goals, i.e. the percentage of time the employee is expected to spend working on the specific tasks. In addition, this system handles the processes that relate to the final appraisal of the employee's performance. The screenshot below is taken immediately after the formulation of the business goals. It shows an excerpt of a PP form of a senior scientist working in PRU:

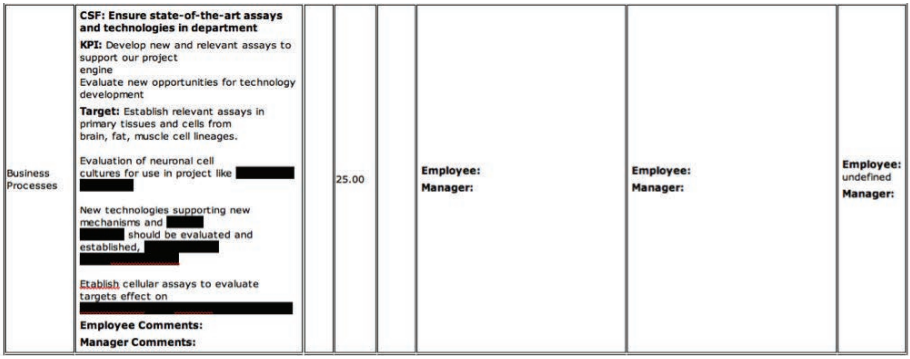

Figure 7. Snapshot of a scientist's PP form, presenting one of the scientist's business targets.

Building on the theory of the Balanced Scorecard (Kaplan & Norton, 1996), the PP forms require that all goals are bracketed into more and more specific formulations of the activities that the employee needs to perform during the year. The screenshot above only shows one goal (out of 15 goals) taken from an individual's PM form. 'CSF' is an abbreviation for Critical Success Factor, which requires a description of the overall purpose of the specific goal. 'KPI', which is an abbreviation for Key Performance Indicator, requires a text that makes the goal more specific. The 'target' category requires the employee to be even more specific about the requirement of the planned activities. As shown in the fourth column, this particular employee is, for instance,

accountable for developing 'new opportunities for technology development', 'evaluating cell cultures', and ensuring 'state-of-the-art assays and technologies' based on a formal impact ratio of 25 per cent. This means that the relative success of achieving the goals impacts this particular scientist's annual performance rating by 25 per cent.

4.2.3. The PP form as a text in conversation with other texts

As was the case with the scientific visualization and the milestone, the PP system was sometimes interpreted as a positive force, creating focus and enabling communication and collaboration. For instance, the SCR research manager described how he was relatively certain that all of his scientists contemplated their business goals in a productive way on a daily basis (ResMan7). He described how he could use the PP system to make complex tasks more concrete and doable, for instance, by asking his employees whether they had put a particular task into their PP form. In this way, the manager emphasized how this type of text helped him organize innovation processes. Success with such an approach, however, depended on how well things were balanced, seeing as the scientists should also be allowed autonomy. This was difficult when time was limited:

> 'Often, at our meetings [scientists get] a lot of good ideas to solve different tasks. Whereas you can feel that when the pressure… increases then you… choose to reject [these ideas] […] every time we approach a milestone; that they really focus, and that is then about balancing things, right?' (ResMan7, SCR dept.)

When taking all our empirical material into consideration, it is striking how the positive effects of PM systems and the idea of balancing scientific aspirations and organizational demands was linked to the special work conditions of the SCR department. Bear in mind that this department only had to manage its own projects, while the PRU organization's other departments were structured around research projects in a matrix. As a consequence, scientists in the other departments typically worked on three to four different projects simultaneously, and the PM system had different constitutive

effects than the ones observed in SCR. We have chosen to include material from these additional departments in the treatment of this control object, both because they emphasize that effects of control objects are contingent and also because they enhance our understanding of their possible role in the organization of innovation.

In the other departments, scientists expressed the concern that the PP system encouraged cheating in that people were determined to receive a bonus (Res15, PRU). Some scientists explained that it was a known strategy to formulate unambitious goals at goal setting, both to ensure the realization of a bonus by setting lower goals (Res16, PRU) and to lower risk-taking (ResMan1, PRU). Thus, scientists from those research areas talked much more about how the PP system produced egocentric behaviours (Res10, PRU), in that the system encouraged shortcuts, did not necessarily foster the best ideas (Res3, PRU), and that scientists tended to produce PP forms that were boring and unambitious (Res7, PRU) in order to over-perform on their business goals during the year.

In one specific department, two scientists independently described how they had witnessed scientists manipulate their findings in order to increase their chances of receiving better performance ratings via the PP system. They also admitted to having participated in such practices themselves. Thus, the unifying role of the PP system – highlighted in the case of the SCR department – shone in its absence. In the quote below, one senior scientist expresses how he finds the basic principles of the PM systems problematic. He is particularly critical of the PRU unit's forced distribution of performance ratings, which implies that the individual performance appraisal depends on how other individuals of the department perform in comparison:

> 'The better you are when compared to your peers, the better it is. There are two ways of becoming "best": Either you make the others perform worse than you, or you are really good yourself. Out

here, we don't have enough transparency to ensure that the strategy of limiting your peers' performance doesn't work. It really works! There are lots of examples... especially in the early phases of research projects.' (Res10, PRU)

The scientist refers to the PP system's design, which forces a normal distribution of ratings. This effectively means that all first line managers only have a specific number of good, mediocre and bad performance ratings available when appraising the performance of their employees. In other words, the system offers predefined texts to be put into the performance conversations, and as the interview excerpt below shows, this organizes peoples' work in certain ways.

Scientist 10: 'Honestly, I have to admit that I also hide targets for next year, as I've already performed well this year. That actually delays those targets with those [extra] years.'

Interviewer: 'So, in a way you actually restrain yourself from working?'

Scientist 10: 'Yes, I definitely do. Because it would give me more work, and I know that I'm already performing, and I can't get more than exceed expectations anyway.'

In this way, the scientist produces new ways of responding to and gaming the texts produced by the PP system. The PP form limits the process of scientific discovery because people tend to respond to the PP system simply by doing what it asks, which in turn causes the PP form to have co-constitutive effects on innovation. While it may seem counterintuitive to regard the interplay between managers, employees and the PP system as a conversation, this is nevertheless how this employee describes the relationship. The text makes demands in a particular way, but the conversations between systems, employees and managers do not take place as intended.

When comparing these two opposing cases of how the PP system works, it seems that in SCR the PP system is shaped in conversations with texts about shared purpose, collective goals, conceptual

models and aspirations – and it also seems to be somewhat flexible. Scientists' shared texts supported their shared vision and the organization of innovation. By contrast, observing the PP system in several other research units in the organization demonstrated how a lack of common texts compelled scientists to produce particular (counterproductive) answers to the individual forms of the PP system, compensating for its rigidity as well as the lack of common organizational texts.

5.0. Discussion: Implications for controllability and the management of innovation

The last part of the above analysis illustrated how a control object does not have necessary effects built into it. Through the text/conversation dynamic of the communication perspective presented in this article, it was highlighted how PM forms are constituted via conversations and how they co-constitute the organization of innovation in different ways, depending on the other texts that take part in the conversation. This observation is in line with other studies of objects in innovation, as they have argued for a multiplicity of roles played by objects (Nicolini et al., 2012; Scarbrough et al., 2015). Besides this, the symmetrical approach of the CCO approach also enabled an analysis of how many of the texts taking part in the conversations are neither referred to by other texts, nor acknowledged by the actors engaging in conversations.

5.1. Controllability

The case of the ventilation system showed that it is useful to be aware of other types of objects in addition to the PM system in the organization of innovation. Also, technological artefacts can be interpreted, and should be interpreted, as texts in conversations with visual representations, models and other objects used in the organization of innovation. The often taken-for-granted authority of PM systems can suddenly change when other objects affect controllability. The case highlights the importance of recognizing that all organizational objects and actors are potentially significant analytical entities if we strive to understand the organization of innovation.

The findings of the analysis point to the fact that controllability (and uncontrollability) cannot be accounted for by PM systems or other management systems. Hence, they challenge the use of PM systems in the organization of innovation. Controllability is an important concept in the accounting literature (Antle & Demski, 1988; Fisher, 2010; Merchant, 1987) and an important and often taken-for-granted principle among managers and employees. The present study does not contradict the relevance of controllability or its centrality to PM systems, but the case has offered empirical evidence of how various texts – also PM texts themselves – contribute to creating a lack of controllability. Where the concept of controllability is usually used to explain the *conditions* for designing enabling PM systems, controllability in this case becomes constituted in constant and unpredictable interactions throughout innovation processes. For instance, the study showed how some scientists attempt to regain a type of controllability by modifying the PM system. In the SCR case, the research manager included the ventilator in the conversation about milestones and was able to affect the PP system by changing the milestone. Elsewhere in the organization, scientists engaged in conversations with the PP system with other tangible consequences: we saw how some scientists tinkered with their findings, for instance, by entering flawed references from their findings into the PP forms in order to have a better PP rating. In that way, scientists gained control over the PP system and their individual bonuses.

5.2. The management of innovation

The present article has discussed the *organization of innovation* as a broader concern than the topic of *managing innovation*. However, we would like to touch upon how the discussion about PM systems and controllability has implications for the management of innovation. In our case, the SCR research manager successfully convinced upper management that it was the building's fault rather than the team's fault that the first milestone was not reached (ResMan7); and this was not a problem. However, making such an argument is probably not always possible in other organizations

or situations. We therefore believe that we are able to raise important general questions based on our analysis of the dynamic interplay between laboratory matters and PM (or work objects and control objects): Are responsibilities in knowledge organizations fairly distributed among the right actors? Could we identify new ways to address and handle interactions between management technologies and objects that are not able to speak? For instance, should PM systems be designed in a way that gives legitimacy to spokespersons of such silent actors, i.e. by formulating this as a possibility in the control systems of innovation organizations? We do not claim that this article has found a solution regarding how to manage innovation. Rather, we have offered some new theoretical and empirical perspectives on how formal management technologies, such as PM systems, can be understood as texts that are part of conversations that constitute the organization of innovation. This type of empirically based account of constitutive texts and their implications for management adds to previous case studies, for instance, of how objects may become 'unruly' due to their capacity to generate questions and open up issues. This is the case with Ewenstein and Whyte's epistemic objects, and the two authors advocate more awareness and communication about this among managers (Ewenstein & Whyte 2009, p. 28). Such empirically based analyses of objects enable us to better describe and problematize what is potentially at stake in the management of, for instance, innovation.

6.0. Conclusion

On the basis of a case study from the research areas of a multinational pharmaceutical company, we have offered an account of how the organization of innovation is constituted by a range of organizational texts and conversations. In the following, we will discuss the empirical, theoretical and practical contributions of this study. Empirically, the study contributes to our understanding of the organization of innovation and, by extension, knowledge work. The case is interesting for organization studies because it not only highlights obvious collaboration or coordination tools, but

also the types of mundane and silent objects that sometimes play leading roles in the organization of innovation. At the same time, this study shows how a range of management control initiatives become more flexible and less dominant than they are perhaps commonly assumed to be. Previous studies of the role of objects in innovation (e.g. Ewenstein & Whyte, 2009; Nicolini et al., 2012; Scarbrough et al., 2015) have similarly argued that the role of objects may change, depending on the relations and situations that shape them. However, whereas existing literature tends to focus on objects as elements in collaboration, the present article has emphasized the contingent effects of multiple types of objects that are not necessarily coordination tools.

Based on the empirical findings, we contribute theoretically to organization studies with our model of the organization of innovation (Figure 1). The model illustrates the point that control objects and work objects are engaged in ongoing conversations that constitute the organization of innovation. This model is developed on the basis of our interdisciplinary theoretical framework, building on CCO and inspiration from management accounting studies and Science and Technology Studies. The framework is first and foremost built upon the text/conversation dynamic central to CCO thinking. This allowed us to look at organizational processes as a set of conversations between a range of organizational texts and which constituted processes of innovation.

We expanded the text concept by developing the analytical categories of control objects and work objects. We thus offer an example of how the text/conversation dynamic may be turned into a domain-relevant analytical framework through engagement with other scholarly traditions. We highlighted two types of texts (or objects) as particularly relevant for the organization of innovation, inspired by laboratory studies and management accounting studies. In addition to contributing to organization theory, the interdisciplinary framework also speaks to laboratory studies and

management accounting studies. In laboratory studies, the realization that materiality plays a role in innovation is not new but rather the starting point (Latour & Woolgar, 1979; Pickering, 1995). However, by having a symmetrical communicative perspective on the organization of innovation where the concept of text is broadly defined, we draw attention to how management technologies can also be considered constitutive of work in the laboratory. Likewise, in the management accounting field, the interest in how PM works in uncertain innovation environments has been long lasting. However, by drawing on the CCO perspective and laboratory studies, the case offers new perspectives on how to study these uncertainties as conversations between texts that unfold in particular empirical settings where biological matters and other work objects have constitutive effects.

The empirical case and the theoretical perspective lead us to conclude that, in practice, the challenge of organizing innovation not only concerns understanding the multiplicity of conversations between many different types of texts, but also having a receptive approach to their changing ontologies, authorities and organizing effects. Hence, the organization of innovation demands attention to the way texts are locally interpreted and have contingent constitutive effects. Such a sensibility seems crucial to relevant managerial interventions and productive conversations.

[Paper two ends here. References appear at the end of this thesis]

8.3. Paper 3

Accounting for organizational citizenship behaviour: attempts to formalize the informal in a global pharmaceutical company

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Abstract

This paper studies organizational initiatives to formalise, measure and incentivise particular aspects of employee behaviours, often referred to as Organizational Citizenship Behaviour (OCB), through performance management practices in a global pharmaceutical company. Based on a single case study the paper contributes to management accounting research on performance management in practice and to the literature on OCB, popularized in organization theory since the 1980s. OCB relates to extra-role behaviour, which has been recognised as difficult to formally control and manage. Our study examines how different framings of OCB-related initiatives produce a variety of consequences. Drawing on Callon's (1998a, 1998b) framing metaphor we show how different devices, performance management elements and management interventions take part in formalizing OCB and making it calculable and real for the employees in the case organization. We argue that these processes are shaped through three different framing aspects that we identify as dimensioning, measuring and managing OCB. We also argue that the effects of these particular framings depend on the role employees are granted throughout the process of formulating and appraising OCB performance, such as whether they are involved in specifying relevant performance ex ante or ex post.

Keywords:

Management control, performance measurement, organizational citizen behaviour, measurability, framing, practice-based management accounting

1.0 Introduction

For the past decades management accounting researchers and practitioners have discussed how to best evaluate and enhance employee performance. While it seems to be widely agreed that measuring performance is an important management tool, researchers and practitioners also acknowledge that measuring the right things and evaluating employee performance accurately and fairly is difficult. Hence many organizations are occupied with changing or refining existing performance measurement systems, for instance by adding new elements to improve their accuracy, effectiveness and fairness. In today's large-scale organizations new performance management initiatives are sometimes designed to measure a particular type of behaviour, which the literature refers to as: organizational citizenship behaviour (OCB) (Organ, Podsakoff, & MacKenzie, 2006; Smith, Organ, & Near, 1983), contextual performance (Organ, 1997) or pro-social performance (Brief & Motowidlo, 1986). Despite, however, the wide distribution of performance measures that seek to capture this type of behaviour in practice, only little research has studied the effects of these performance measures and the specific conditions under which they are developed in organizations. Organ's seminal and much-cited definition of OCB states that it is "individual behaviour that is discretionary, not directly or explicitly recognized by the formal reward system and that in the aggregate promotes the effective functioning of the organization" (1988, p. 4). Such behaviour is extra role and extra task, because it is not a required, formal part of the job description. It is nonetheless recognised as important to the organization because it "supports the social and psychological environment in which task performance takes place" (Organ, 1997, p. 95). OCB

includes helping peers and complying with corporate values (Smith et al., 1983; Williams & Anderson, 1991). Referring to Organ's OCB framework Kark and Weismel-Manor distinguish between five dimensions, and conclude that these have been subject to much empirical research on OCB. These overall dimensions are: "altruism (e.g. assisting others who have heavy workloads), conscientiousness (e.g. work attendance beyond the norm), sportsmanship (e.g. not complaining about trivial matters), courtesy (e.g. consulting with others before taking action) and civic virtue (e.g. involvement in the political process of the organization)" (Kark & Waismel-Manor, 2005, p. 893).

Many new performance measurements address exactly the kind of intangible, extra-role and extra-task behaviour OCB highlights. In this paper we conduct an in-depth empirical case study of a global pharmaceutical company, which we call BioTech, and its introduction of behavioural targets, which reflect dimensions of new performance measures that are designed to evaluate aspects of employees' behaviours that resemble OCB in many ways. This, however, points to a seeming paradox. If OCB is defined as intangible, discretionary behaviour that escapes formalisation and that is not captured by the formal reward system, how can it then be measured and accounted for? What happens when the dualisms between judgment and calculation, informal and formal, task-specificity and extra-role behaviour are challenged in practice? Surprisingly little research has discussed how performance measures may foster or potentially hamper OCB (for exceptions see Burney, Henle, & Widener, 2009; Cheng & Coyte, 2014), perhaps because this kind of behaviour has been traditionally seen as not measurable. This assumption is prevalent not only in the OCB literature but also in much accounting literature. For example, Abernethy and Brownell (1997) suggest that when task analysability is low and the number of exceptions is high the programmed types of controls, such as accounting-based behavioural control, appear unfavourable.

This paper contributes to the management accounting literature by exploring how performance measures may be used in the attempt to account for OCB and how this specifically frames employee accountability. Surprisingly little attention has been directed towards providing insight into how managers use performance measures in the effort to make OCB calculable and controllable and, subsequently, into studying the effects these attempts may have in practice. While OCB is supposedly positive we argue, in line with more critical studies of OCB (Bolino, Klotz, Turnley, & Harvey, 2013; Kark & Waismel-Manor, 2005), that attempts to frame OCB lead to certain tensions. Only very few accounting studies (Burney et al., 2009; Burney & Widener, 2013; Cheng & Coyte, 2014) refer to OCB and none of them examine how managers mobilise and seek to make OCB measureable and manageable in practice. By taking a practice-based approach, we address this gap in the literature.

Drawing on Callon's (1998a, 1998b, 2007) "framing" metaphor we examine how OCB was locally and contingently framed as a new performance measurement object in our case company in an attempt to make OCB calculable and employees formally accountable for this kind of behaviour. We also discuss the potential tensions that derive from endeavouring to make OCB a performance measurement object. We suggest that this provides additional insight into the conditions under which OCB is fostered and the effects that performance measures may have on organizational practices.

The remainder of our paper is structured as follows. First, we present the theoretical background for our paper and then position our study in relation to relevant literature on OCB and performance measurement. Next, we introduce our theoretical approach, the research setting, and methodology.

This is followed by an in-depth, empirical case analysis. Finally, we discuss our findings before presenting our conclusion.

2.0 Organizational citizenship behaviour and accounting

Coined by Smith, Organ and Near (1983) and Bateman and Organ (1983), OCB has given rise to a vast number of research publications in the fields of industrial psychology, organizational behaviour and management studies (e.g. Bergeron, 2007; N. P. Podsakoff, Whiting, Podsakoff, & Blume, 2009; P. M. Podsakoff, MacKenzie, Paine, & Bachrach, 2000). In accounting research, however, only few studies refer to the concept (Burney et al., 2009; Burney & Widener, 2013; Cheng & Coyte, 2014) and the issue of how OCB is made manageable and calculable by means of performance measures is a neglected area.

The notion of OCB as introduced by Smith, Organ and Near (1983) and Bateman and Organ (1983) draws on earlier writings by Barnard (1971/1938), Katz (1964) and Katz and Kahn (1966), directing attention towards extra-role or contextual performance as opposed to in-role or task performance (Borman & Motowidlo, 1997; Organ, 1997; Van Dyne, Cummings, & Parks, 1995). OCB is defined as discretionary behaviour that is of a more volitional and spontaneous nature than core job behaviour (Farh, Zhong, & Organ, 2004; Organ et al., 2006). Nevertheless, OCB is perceived as a decisive aspect of organizational effectiveness (Van Dyne, Graham, & Dienesch, 1994, p. 765) by "lubricating the social machinery of the organization, reducing friction, and/or increasing efficiency" (P. M. Podsakoff & MacKenzie, 1997).

Multi-dimensional, OCB (Borman & Motowidlo, 1997; Organ, 1997; P. M. Podsakoff et al., 2000) includes behaviour dimensions such as helpfulness, cooperativeness and general compliance (Smith et al., 1983; Werner, 1994; Williams & Anderson, 1991). Borman and Motowidlo (1997, p. 102)

provide the following examples of OCB: “persisting with enthusiasm and extra effort to complete own task activities”, “volunteering to carry out activities not necessarily part of the job”, and “endorsing, supporting and defending organizational objectives”, in addition to “helping and cooperating with others” and “following organizational rules and values”. These elements clearly illustrate the scope of the concept, but also question the distinctiveness of OCB (Organ, 1997; Van Dyne et al., 1994). Nevertheless, Dekas et al. (2013) note that many scholars operationalise OCB according to the multi-dimensional conceptualisation of extra-role behaviour as summarised by Borman and Motowidlo (1997), defining OCB in parallel to Organ (1997) as “performance that supports the social and psychological environment in which task performance takes place” (Organ 1997, p. 95).

2.1. OCB and formal performance evaluation

Originally Organ (1988) defined OCB as behaviour that is not explicitly recognised by the formal reward system. Much OCB research continues to argue that OCB is difficult to include in formal performance measurement systems and that OCB is not contractually rewarded because it is discretionary (Van Dyne et al., 1995, p. 218). For example, Smith et al. (1983) underlined that “much of what we call citizenship behavior is not easily governed by individual incentive schemes, because such behavior is often subtle, difficult to measure” (ibid., p. 654). Nevertheless, OCB research also illustrates that employee OCB clearly has an impact on managers’ overall performance evaluation of their employees (Allen & Rush, 1998; MacKenzie, Podsakoff, & Fetter, 1993; P. M. Podsakoff et al., 2000; Werner, 1994). Only little research, however, has examined how measurement and management of OCB is being practiced in organizations.

The management control literature typically describes phenomena similar to OCB as objects for non-accounting controls, such as cultural and personnel controls (Merchant & Van der Stede,

2012), clan controls (Ouchi, 1980) or beliefs and boundary systems (Simons, 1995). Recently a handful of studies in the accounting literature explicitly address the notion of OCB (Burney et al., 2009; Burney & Widener, 2013; Cheng & Coyte, 2014), but none of them examine how managers mobilise and seek to make OCB measureable and manageable in practice. Based on quantitative studies, Burney et al. (2009) and Burney and Widener (2013) discuss the interrelation between accounting systems and OCB and the focus on the relationship between the employees' perceived fairness of the strategic performance measurement system and OCB. Cheng and Coyte (2014) examine how two performance measurement system designs – incentive scheme subjectivity (subjective weighting) and communicating the value of human-based intangible assets through a strategy map – affect employee willingness to share knowledge and their general tendency to exhibit extra-role behaviour. They focus, however, solely on the presence of the two design choices, subjective weighting in the incentive contract and the communication of human-based intangible assets and their relationship to extra-role performance.

Our study adds to the burgeoning management accounting literature that addresses OCB. In contrast to the vast majority of literature on both OCB and OCB and accounting, our approach is qualitative, practice-based and constructivist. Practice-based studies in management accounting generally focus on organizational actors in empirical situations (Ahrens & Chapman, 2007), while actor-network theory (ANT) inspired, practice-based studies pay particular attention to technologies and devices (Dambrin & Robson, 2011; Justesen & Mouritsen, 2011). According to Dambrin and Robson, "To understand performance measurement as a practice implies […] an exploration of the concrete instruments, software, and calculations that link 'managers' and the 'managed'" (2011, p. 429). In line with this, we examine how the attempt to make OCB measurable and controllable was unfolded

in practice and how organizational, material devices played an important role in these processes. To this aim, the framing metaphor developed by Callon is useful.

3.0. Framing

Callon's (1998a, 1998b, 2007) framing metaphor is a particular conceptualisation within ANT that has not been greatly explored in accounting studies. Notable exceptions are Skærbæk and Tryggestad (2010), Christensen and Skærbæk (2007), Roberts and Jones (2009), Kastberg (2014), Callon (2009) and Lohmann (2009). This metaphor is useful in our study because it brings attention to the fact that objects are constantly made and remade rather than given (Lohmann, 2009, p. 503). According to Lohmann, the framing metaphor "focuses on what produces and sustains the objects and agents" (Ibid.). In our case this implies that OCB as a performance measurement object is not seen as endowed with intrinsic, invariable characteristics, but comes into being when framed in particular ways. Malleable, the object can only be described a posteriori based on an empirical analysis sensitive to situational details.

The notion of boundary drawing is central to the framing concept. Callon defines framing as a process of disentanglement, which entails that, "… a clear and precise boundary must be drawn between the relations which the agents will take into account and which will serve in their calculations, on the one hand, and the multitude of relations which will be ignored by the calculation as such, on the other" (2007, p. 278). In our study this implied that we had to pay close attention to the boundary drawing related to the introduction of behavioural targets in our case organization. We examined how people discussed what was relevant to take into account and what was not and how these boundaries were negotiated.

Framing is a process that involves heavy investment and continuous work if it is to be upheld. Drawing on Goffman's dramaturgical metaphor, Callon compares a frame to a stage where both actors and audience agree on certain rules of interaction (1998b, p. 248). Agreement is only possible, however, if the symbolic frame is supported by various physical and institutional devices that frame and mark out a delimited space. The stage metaphor illustrates the idea that a frame is a specific demarcation of a space that allows actors to calculate and make decisions relatively unproblematically precisely because they agree on the frame in advance. The frame establishes a set of shared assumptions that make it possible to agree on the calculative procedures and on the elements to be taken into account. Similar to the stage metaphor, however, material and organizational devices are required to support the frame. According to Callon, accounting tools are often important devices in this regard, "Not only do accounting tools constitute spaces of calculability and define the way the calculation is made up, but also, through the reactions they provoke, new calculative strategies emerge which lead to the changing of goals" (1998a, p. 24). This relates to the performativity thesis in ANT which points out that reality is enacted or "performed" by the tools that purport to describe reality. Callon states:

> The most interesting element is to be found in the relationship between what is to be measured and the tools used to measure it. The latter does not merely record a reality independent of themselves; they contribute powerfully to shaping, simply by measuring it, the reality that they measure (1998a, p. 23).

Representational tools are not neutral devices mirroring an independent reality. Rather they invoke reactivity (Espeland & Sauder, 2007) and help shape the reality they measure. Hence examining how a tool like behavioural targets participates in shaping new realities in the biotech sector is of interest. In addition to pointing to how accounting tools may help establish framings, Callon

(1998b) argues that framings are never complete or conclusive; they are always the incomplete, temporary and fragile result of a specific situation. Overflow is an unavoidable consequence of any framing attempt because even if framing brackets the outside world it never cuts all links (Callon 1998b, p. 249), thus implying that overflow is inevitable. Overflows are the norm while successful framing is a costly, fragile and temporary achievement that often calls for new measurements to establish a reframing that contains the overflow. In our case, the framing was still very much in the making, but examples of leaks were nonetheless visible. These leaks will be discussed subsequently in terms of various tensions and uncertainties that resulted from the framing attempts.

4.0. Research context and method

A global pharmaceutical company headquartered in Scandinavia with more than 35,000 employees in over 40 countries, BioTech holds a market-leading position within several treatment areas. Senior management focuses on continually improving performance and in 2011 a sub-department within the corporate human resources management (HRM) organization, Global Performance (GP), required that all business include an explicit and formalised focus on *how* results are achieved as part of their performance management process. The introduction of the *how* in addition to the *what* dimension of BioTech's PM system can be seen as an attempt by the company to introduce organizational citizenship-like behaviour as a relevant object of formal performance measurement and management because, when presented in the firm, the 'how' dimension referred to many of the dimensions characterised as OCB by the literature, such as helping others, complying with corporate values and being enthusiastic. This provided us with a unique opportunity to study what happens in practice when an attempt to measure such behaviour is introduced. The reason for incorporating the 'how' dimension was to explicitly include organizational citizenship-like behaviour in the performance management system and to make this type of behaviour calculable, and thus employees formally accountable for them.

Our case study is based on longitudinal fieldwork conducted over a two-year period at our case organization, BioTech. As part of a wider study, the first author was at BioTech two to three days a week between May 2012 and October 2014 and had the same access and rights as ordinary employees. Throughout this period, 46 in-depth interviews were conducted, 40 of which have been selected as relevant to our case study. Thirty of these interviews were conducted in the research areas of the organization (nine of them with managers) and 10 in GP (which includes three research and development (R&D) human resources (HR) business partners). All interviews were digitally recorded and subsequently transcribed. The interviews lasted between 40 and 85 minutes and all interviewees were promised anonymity (Appendix A[26] provides an overview of interview data). Moreover, the first author participated in 14 leadership seminars in the R&D areas, running over 12 full days, and in nine full days of observing the work of the scientists in one of the three research areas. Six of these seminars were recorded and transcribed. Furthermore, the first author participated in 26 departmental meetings with GP, where corporate consultants discussed various aspects of the organization's global remuneration principles and policies, as well as its global performance management guidelines. None of these meetings were recorded. The seminars and the departmental meetings served as background information for writing the case and aided in formulating relevant interview questions. In addition to interview data, our empirical analysis also draws on various other documents from the case, such as guidelines, performance evaluation reports etc.

[26] In this "thesis version" of the article I instead refer to the table over the interviews in the method chapter (under the headline: "7.4.1.3. Analysing the interviews")

The case examines how behavioural performance measurement was framed differently in two separate business areas, the Protein Research Unit (PRU) and the Instrumental Research and Development Unit (IRDU). PRU conducts research in the very early phases of scientific discovery and primarily employs chemists and biologists, approximately half of whom hold a PhD. The work processes in IRDU, in contrast, are closer to the market. As part of BioTech's research organization, IRDU's primary challenge is to improve already existing market products and it primarily employs engineers and medical doctors, less often with other advanced degrees. Figure 1, below, maps the empirical setting of the case, highlighting our focus on the GP, i.e. the corporate HRM division, as well as two of the major research areas of the organisation.

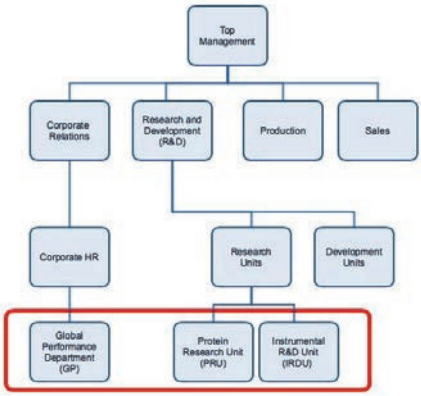

Figure 1. Empirical setting of the case.

BioTech framed OCB as a performance measurement object globally and locally. The global framing refers to the devices and elements mobilised at the company's corporate level. As we will illustrate, the global framing left considerable discretion to the local business units to specify how extra-role performance was going to be accounted for and measured in practice. Thus the local framing refers to the ways in which additional principles, devices and procedures were introduced

at local level to further clarify how OCB could be transformed to calculable behaviour that could be formally accounted for.

5.0. Framing organizational citizenship behaviour

This section contains a three-pronged analysis of the elements that frame the behaviour at BioTech. First we analyse attempts at framing behaviour on a global level. Second we elaborate on how these attempts particularly depend on calculating devices and elements. Third we examine in detail how two different business units attempt to frame behaviour in practice by identifying three significant aspects, *dimensioning*, *measuring*, and *managing* employees, that relate to their individual framing behaviour, each of which highlights various aspects of constructing behaviour as a performance management object.

The *dimensioning* aspect specifies the qualities of what is being framed. Hence it highlights which behavioural dimensions the framing activity takes into account. The *measuring* aspect focuses on converting the qualities of behaviour into quantities. As will be shown, this aspect of framing can be set up in multiple ways and numbers can be used as an input rather than an output. The *managing* aspect refers to the managers' role and the way it is configured by the framing. Based on the analysis of these aspects of framing, we then explore tensions and concerns that stem from these particular framings.

5.1. Global framing

BioTech's GP department defined a global minimum benchmark in for using behavioural performance measures as part of the mandatory PM process and in 2011 top management approved this focus and benchmark. The new corporate policy was inscribed into the organization's standard operating procedures (SOP) for PM and required all managers and employees to "[discuss] business targets (the what) *and* behavioural targets (the how)" (internal SOP document, 2014, italics added).

The document explained that the purpose of the PM process was to "define business and behavioural goals for the individual employee" in a given "performance year" and to ensure that managers and employees would initiate conversations on *how* these goals would be achieved (ibid.). To clarify what defined good behaviour, the GP department's communication and instructions on behaviour targets referred to the core company values described in the company's Organisational Essentials listed in BioTech's value statement, known as the BioSphere Framework. All BioTech's business divisions and their respective senior vice presidents had full autonomy to specify what this meant in practice as long as the essentials were respected. Four of the essentials are presented below (BioTech, intranet, 2014):[27]

[27] The wording of the essentials has been changed slightly for the sake of anonymity. Only four out of the ten essentials are presented here.

THE BIOSPHERE FRAMEWORK (ESSENTIAL 1-4)

1) We treat everyone with respect

- Any professional interaction is conducted in an open, honest and respectful manner
- Everyone in the unit shows respect for the unit's stakeholders and each other
- The unit addresses its specific diversity and inclusion challenges

2) We have a healthy and engaging working environment

- The unit and its employees work actively to create and maintain workplace engagement at a high level
- Working conditions are regularly reviewed and addressed to ensure health and safety

3) We never compromise on quality and business ethics

- A quality mindset is always integrated into the unit's decisions and work processes
- Business ethics and other relevant ethical considerations are always integrated into the unit's decisions and work processes
- All relevant laws, rules, regulations and procedures are known and followed

4) We build and maintain good relationships with our key stakeholders

- The key stakeholders of the unit are identified and constructive relationships are built and maintained
- Internal and external communication is planned and conducted in a timely manner

Figure 2. Excerpt from The BioSphere Framework.

The global framing calls for further specifications because the *how* dimension – in contrast to the *what* dimension – is in itself quite a broad, general category. In order to make more directions and accountability possible, further specifications are needed to provide insight into the processes of

formalising organizational citizenship-like behaviour and to make it part of the organization's PM system.

5.1.1. Introducing global measuring devices

The introduction of behavioural goals was related to BioTech's overall mandatory PM process, which revolves around three key meetings each year in which employees and their first line managers convene to define individual goals, evaluate and perhaps adjust these goals, and finally to appraise individual performance. These three meetings are referred to as goal setting, mid-year review and year-end appraisal. At the year-end appraisal employees are given a performance rating based on a scale with the following five rating steps (six if N/A is included): "Does not meet expectations (DNME)", "Approaches expectations (AE)", "Meets expectations (ME)", "Exceeds expectations (EE)", "Outstanding (O)". Individual bonuses were calculated based of the final performance rating. The IT system handling this global process is called the People Performance (PP) system.

BioTech uses the term 'behavioural targets' to describe the extra dimension added to the already existing performance measurement procedure in an attempt to make desired employee behaviour an integrated part of the formal employee performance review. Connecting behavioural targets directly to the already existing procedure implied that the PP system and procedures were part of the global framing from the beginning. The behaviour, seen as an important new performance measurement object, had to be accounted for in the PP system.

When employees and managers set their individual goals they are required to present them in a specific format provided by the PP system that reflects the Balanced Scorecard principles and requires users to identify critical success factors (CSF), key performance indicators (KPIs) and

specific targets. Figure 3 shows a screenshot of a PP form. The PP system contains two options for writing behavioural targets. They can be added as either standalone items on the list or as a comment on an individual business target.

Year: <Year>
Employee: <Name/Initials>
Manager: <Name/Initials>

Rating scale
O: Outstanding
EE: Exceedes expectations and goals
ME: Meets expectations and goals
AE: Approaches expectations and goals
NM: Does not meet expectations and goals
N/A: Not Applicable

Use the 3P toolbar to add, delete and rate goals

Balanced Scorecard Perspective	Goal setting (December 1st to February 28th)		Mid-year review (June 1st to August 31st)	Year-end appraisal (December 1st to February 28th)	
	Balanced Scorecard CSF/KPI/Targets	Weight (%)	Comments	Comments	Rating (see scale above)
Finance	CSF: KPI: Target:		Employee: Manager:	Employee: Manager:	
Customers & Society	CSF: KPI: Target:		Employee: Manager:	Employee: Manager:	
Business Processes	CSF: KPI: Target:		Employee: Manager:	Employee: Manager:	
People & Organisation	CSF: KPI: Target:		Employee: Manager:	Employee: Manager:	
Additional goals	CSF: KPI: Target:		Employee: Manager:	Employee: Manager:	
Supporting Competence Goals	CSF: KPI: Target:		Employee: Manager:	Employee: Manager:	

Figure 3. Snapshot of a blank PP form. Business targets (what) and behavioural targets (how) are entered in the 'Goal setting' column. At the mid-year review the manager evaluates the success of the targets and at year-end appraisal the employee receives several task-specific ratings, in addition to a single final PP performance rating.

GP allowed each business area to locally adjust the behavioural targets as long as they adhered to the centrally formulated requirement based on the global SOP that all line managers, at a minimum, discuss behavioural issues and measures with their employees at the annual performance review meetings. In addition the GP allowed but did not require that behavioural targets carried specific weights. As the subsequent sections show this considerable autonomy led to local framings that differed significantly in the two business units studied. As a consequence, this also led to different tensions and concerns in the two units.

5.2. Framing desirable behaviour in IRDU

In IRDU the local framing aimed at making behaviour count as much as results in the formal performance measurement process. Behavioural targets were integrated into the same template, the PP form, as business targets and the development of a matrix as a calculating device granted similar weights to the two different measures. For this to make sense, however, desirable types of behaviour had to be specified, meaning that some kind of framing was necessary to define where to draw the boundary for relevant behavioural dimensions to be taken into account (Callon, 2007).

5.2.1. Dimensioning

The newly introduced behavioural targets became connected to a locally developed device referred to as the TEBBE framework, which specified behaviour IRDU defined as desirable. In TEBBE, 'T' stands for "Take ownership", 'E' for "Engage stakeholders", 'B' for "Be constructive", the second 'B' for "Be proactive" and the last 'E' for "Energize". These five key behaviours pointed at behavioural dimensions considered important and were described further in a document with five generic texts.

TEBBE behavioural targets (no. 1-5)	**Definition**
Take ownership	Being accountable for assigned tasks, taking the driver's seat to ensure quality results; being obligated by one's knowledge, insights and capabilities and acting accordingly
Engage stakeholders	Actively involving stakeholders in a mutually beneficial collaboration, aligning expectations and ensuring commitment

Be constructive	Having a productive attitude focusing on finding the best solution that builds on knowledge, experience, creativity and lessons learned
Be proactive	Foreseeing and acting upon opportunities and problems to be one step ahead and thus create room for manoeuvring
Energize	Showing an encouraging mindset; actively participating in creating a positive atmosphere

Table 1. IRDU's TEBBE framework of behavioural targets (BioTech, 2014).

The TEBBE framework helped specify the kind of the behaviour considered desirable and thus behavioural dimensions to be accounted for and measured by the new behavioural targets. In that sense, the framework was part of the local IRDU framing of behaviour as a new performance measurement object. It helped define what to take into account by drawing a boundary between relevant behaviour and other aspects of behaviour to be ignored (Callon, 2007, p. 278).

The descriptions of desirable behaviour outlined in the TEBBE framework reflect aspects that can be seen as OCB, because they refer to behaviour that is supposed to provide a supporting social and psychological environment in the organization (Organ, 1988). For instance the use of the imperative in the description and the emphasis on being energizing specified in the TEBBE framework is a clear example of this. In general, the TEBBE descriptions emphasise certain attitudes, responsibilities and a behaviour that exceeds the expectations connected directly to the task, i.e.

when someone is “takes the driver’s seat”, participated in creating a “positive atmosphere” or really has a “productive attitude” (ibid.).

The TEBBE framework was communicated to IRDU employees in several ways, e.g. by placing big signs in the staircases of IRDU’s premises, as shown in Figure 4. In this way employees had daily reminders about the TEBBE framework and the kind of behaviour expected of them, which can be seen as attempts to frame employee behaviour.

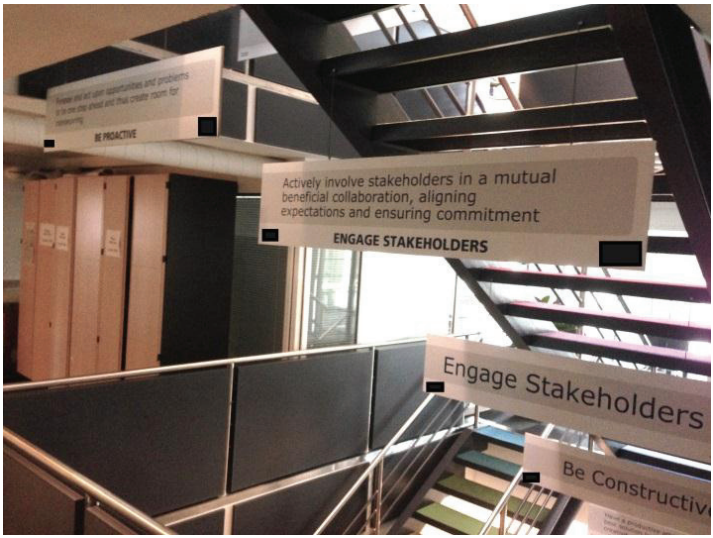

Figure 4: Highly visible large signs on stairs at IRDU listing desirable TEBBE behaviours

These visible artefacts showing the descriptions of TEBBE did not stand alone as the only framing element. Another important device was the PP form, as indicated by the following quote from an employee interview: “I think we attended some seminars and things like that where we discussed it [behaviour]. But, it didn’t become … *real*, like actually *real*, until we got it into our PP forms, where we had to come up with some examples ourselves” (Researcher 15, IRDU, 2013). In this researcher’s opinion the

TEBBE framework gained a certain reality – and became more real – when recorded on the PP form compared to when it was discussed more abstractly during seminars. The same point was made by another IRDU employee:

> … and it's really something you can relate to in your everyday life in relation to the people you meet. It's really useful. And because it's now part of the PP I think it's more in focus than it would have been otherwise. Because you're measured on it and you can just write what you've actually done to be proactive and so on. It's quite a big part of my PP (Researcher 15, IRDU, 2013).

The PP forms made behavioural targets "real" because they forced employees to take them into account and they specifically framed the process because they connected behavioural targets directly to TEBBE by inscribing the generic texts in the PP form under goal setting. At the mid-year review each individual employee would be asked to identify and describe a set of personal examples of behavioural performances from the past six months illustrating individual behaviour. These personal examples would have to reflect the five generic descriptions listed in Table 1. Thus, instead of setting specific targets ex ante, specific examples were to be identified and presented by the employees ex post. Employees filled in the online PP forms with examples relevant to each TEBBE target. These self-accounts were then to be discussed by the employee and his or her manager, and after the mid-year meeting the manager would formally comment on the self-account using the PP form.

The format of the PP form supported a particular framing because it required employees to provide short, specific examples describing their past behaviours and performance. The employees' self-accounts had to live up to the design configurations of the PP forms, which thereby framed how employees could select, prioritise and formulate their formal input:

> [The PP form has] a limited space and we can only select the more significant [behaviours]. So, it's more the key projects, how we perform, and not the smaller things that we would've done. If you don't have any key performances then you probably use the smaller things [to fill into the PP form]" (Researcher 18, IRDU, 2013).

The demand for specific examples related to TEBBE prompted and shaped self-reflections, as illustrated by the following statement about filling out the PP form:

> OK, do I have any examples, situations where I've been constructive? And then I write it *here* [she points to a comment field in her online PP form and gives an example of what a comment for behavioural target no. 3, being constructive, might sound like]: At the last meeting I think I did this and this and that has generally helped me (Researcher 15, IRDU, 2013).

The example shows how a self-accounting process unfolded when the employee had to provide specific examples and account for her behaviour on the PP form. The examples needed to be written so they fit the constraints of the standard PP form and they had to relate to the broadly formulated descriptions of desired behaviour in the TEBBE framework. In that sense the PP form was constraining but also acted as a dialogue partner in the production of the employee's self-account. In this case the employee reflected on herself in a new way, which she found positive:

> I think it's good because, generally I'm not self-confident – or I have a low self-confidence sometimes – and then I think 'OK, I'm good enough', or something. So, this [TEBBE framework] can help, because then I think 'Oh yes, I actually did this and that, so I'll be fine (Researcher 15, IRDU, 2013).

As indicated by the researcher the process of accounting for her past behaviour was about more than just making the quality of her performance visible to the first line manager, it also involved a process of self-reflection.

The relevance of the TEBBE framework depended on the systemic configurations of the PP system as well as on the rules that defined how employees were to interact with it. Employees clearly had to be selective because the written examples would represent only a few of their activities from the past six months. Due to the limited amount of space and the standard text that framed their self-accounts, employees could only account for certain aspects of their behaviour rather than others and they had to be fairly brief. As a result the PP forms proved to play an important role in the ex post formulation of behavioural performance.

5.2.2. Measuring

The TEBBE framework and its insertion into the PP form framed the way IRDU employees accounted for their behaviour, making certain behavioural dimensions more relevant to emphasise and relate to than others. These self-accounts became the basis for rendering the employees' annual performances "calculable and comparable" (Miller, 2001, p. 380), though not in a straightforward manner. The self-accounts in the PP form typically had a qualitative character. Employees wrote examples related to the generic TEBBE text but with few other restrictions. This made the question of measurability and comparability pertinent because IRDU still had to evaluate and allocate individual bonuses. The non-quantified and only very loosely standardised (by the TEBBE framework and PP form) accounting format made the issue of measurability a managerial concern at IRDU. While quantification and common metrics invite immediate comparisons (Espeland & Lom, 2015), the narrative form of the qualitative accounts like the ones produced at IRDU require translation work if employee performance is to be measured based on them. The idea that the behaviour had to be measurable was important for IRDU managers right from the beginning. This is reflected in the following interview response from a research manager:

> So we agreed that behavioural targets could be a good way of measuring each other. We wanted something that could be measurable, which is why we talked about the option of putting these targets on people's PPs, simply into their individual PP forms […] We said, 'Well, if we're going to work with behaviour we have to be able to measure it and then it has to be so hardcore that we put them [the behavioural targets] on their PP forms (Research manager 8, IRDU, 2013).

Thus while IRDU wanted to have "soft" in addition to "hard" targets, and seemingly more tangible business targets, they also wanted to make the soft targets hardcore by including them in the PP and making them measurable. Even though putting a formal weight on behavioural targets was not mandatory, IRDU management connected them to formal weights using the matrix in Figure 5.

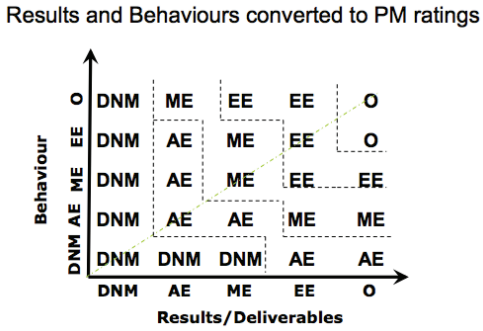

Figure 5. Matrix used by IRDU managers to identify employees' final performance ratings.

The matrix made behavioural targets calculable and presented them as commensurable with business targets. According to the matrix behavioural targets were to account for 50% of the final performance rating, which meant, for example, that if a manager found that an employee exhibited EE behaviour, but that the annual business targets were only ME, the final performance rating would be ME. IRDU managers used this approach in their performance evaluations of employees.

By using backwards calculations the results and behaviour matrix was sometimes used by managers to identify which specific underlying "what" or "how" ratings the manager could chose to communicate to the individual employees without needing to change the already-identified overall performance rating. Instead of "loading" the matrix with both sub-ratings (the final what and how rating) the opposite sometimes happened. A predetermined final performance rating was instead used to check how far the manager could push either category to use the individual rating as a piece of informal communication to motivate the employee. The employee would then be provided with three ratings comprising one overall, official performance rating entered in the IT system and two individual, unofficial ratings on the behavioural and business results:

> I know that if I give an 'exceed' for behaviour[al targets] and a 'meet' for business [targets] we land on a 'meet', right? That's good to know. And I know that I can also give an 'outstanding' … if we've agreed that the employee should end with an 'exceed' … So, I can tweak it by saying 'Well, I can give an 'outstanding' on behaviours and an 'exceed' for business [targets], and that makes an 'exceed' as the outcome, right (…) It gives me some space so I can tweak it a little bit … Without that I need to land on an 'outstanding' or go down to a 'meet' (Research manager 9, IRDU, 2013).

The manager explained that communicating the two different ratings could help frame the final rating differently: "It is like getting a plus on your grade […]. I mean, it's a big meets expectations, but still … It's still quite nice to know that you got an exceed on behaviours, and then there are some other factors that caused it equal a meet, right? (Research manager 8, IRDU)." Consequently, while framing the assessments and getting the calculations behind them right appears to be a managerial challenge, the employees also described how they put significant amounts of energy into presenting their performance as favourably as possible.

5.2.3. Managing

A manager's response is reduced to an 'agree' on PP forms, but at the three meetings mentioned earlier, discussion on these issue was much more exploratory and the ex post target assessments worked as the basis for qualitative dialogues between employees and managers. A research manager stated the following in an interview:

> I think it's fine to have a balance and not just focus on reaching the goals […]. And another aspect is that it becomes legitimate to talk about it, face to face. You can now say, 'Well, we have these requirements and I would really like you to interact more with your stakeholders. How can you and we work on you getting closer to that?' So I actually think it's a good tool to facilitate that kind of talk (Research manager 9, IRDU, 2013).

Later in the interview this research manager continued with: "Then I don't have to defend myself or explain why I suddenly begin addressing this issue, right" (Research manager 9, IRDU, 2013). This framing of behaviour as a relevant aspect of performance made it legitimate for the manager to address behaviour as something to be accounted for and as an object for management. In that way behavioural targets transformed the conversations and the object of the performance measurement management process. They redefined the boundaries of what to take into account (Callon, 2007).

On the one hand, the combination of PP forms and the results and behaviour matrix worked as a calculating device, which was used by managers for measuring performance. On the other hand, it also became an element that enabled a new way of having dialogue between managers and employees. This emphasises at least one of many possible ways in which such elements shaped how managers actually managed and framed OCB at IRDU. The example given below in Figure 6 shows how a PP form was used as a dialogue facilitator between a research manager and a researcher. As the screenshot of the researcher's (Researcher 16, IRDU) PP form shows, the researcher and his first line manager formally (although in a rather informal way) discuss the researcher's success in

living up to the accountabilities related to his 'energize' behavioural target at the mid-year review and at the year-end appraisal.

Supporting Competence Goals	**CSF: Ensure display of IRDU behaviour goal: Energize** **KPI:** Express an encouraging mindset - actively participating in creating a positive atmosphere **Target:** Responsible manager, colleagues and stakeholders to experience Energizing behaviour **Employee Comments:**	31 Dec 2013	1.00	**Bonus**	**Employee:** Give positive feedback to stakeholders on a monthly basis in order to keep a good working relationship **Manager:** I am loooking fortward to times when we are in the office together ;-) You have a great energy - this is highly appreciatet	**Employee:** Keeping up the spirit. I think a positive attitude in itself is energizing **Manager:** as mid year - fantastic	**Employee:** ME **Manager:** EE

Figure 6. Screenshot of a researcher's PP form showing the dialogue on a TEBBE behaviour at the mid-year review and at the year-end appraisal.

The screenshot shows how the researcher (i.e. the employee) has followed the requirements for self-assessing the goals he is accountable for achieving. The overall goal on living up to having energizing behaviours is justified with an example of how the researcher gives "positive feedback to stakeholders on a monthly basis in order to keep a good working relationship". The manager responded to this self-account with: "I am loo[o]king forward to times when we are in the office together ;-) You have a great energy – this is highly appreciate[d]" (see Figure 6 above). Approximately six months later, the researcher updated how he continued to work on this goal since the mid-year review and noted that he kept up the spirit and that he thinks that "a positive attitude is itself energizing". Again, the manager responds that his performance on this TEBBE target was fantastic at mid-year. This forms the basis for the manager's decision to give the researcher an EE

and not the more modest ME, which was the researcher's self-assessed performance rating for this target.

5.3. Tensions and concerns

Behavioural targets, TEBBE, the PP forms, the matrix and the two performance appraisal meetings framed behaviour as an accounting object in particular ways. But they also led to several concerns and tensions. For example, the attempt to make employees formally accountable for energizing behaviour turned out to be difficult. On the hand, it was inserted into PP forms and, as the example above (Figure 6) showed, and employees would e.g. describe how they were creating a positive atmosphere by being empowering, appreciative and encouraging. In that way supportive and organizational citizenship-like behaviour was framed as a relevant accounting and performance measurement object. It became a topic during appraisal meetings and a calculable object when managers weighted it and related it to the matrix.

On the other hand, the same example also illustrated that ex post descriptions exemplifying energizing behaviour could lead to rather unspecific self-accounts, which were difficult to control. This aspect concerned both managers and employees because they saw this "fluffiness" as generating unwanted consequences. A researcher described the problem as follows:

> [B]eing energetic is something quite difficult to … I could be proactive and engage stakeholders – the more you can relate it to concrete examples [the better] … But being energetic is, for instance, like my manager says, 'every time you walk through the meeting room or something – you smile and look positive' or something like that […] (Researcher 18, IRDU).

Another employee explained that she thought that this particular behaviour dimension signalled personality rather than changeable behaviour:

> Yes, it's also something about being a little extroverted in a way and that can be difficult for some people […]. For instance, I have a colleague, Anne, she's good. And she laughs all the time and I regard her, in a way, as being a good energizer. But, some people are quieter and I think I'm a little in between. So, this exact behaviour, I think, is difficult (Researcher 15, IRDU).

Notably, even if the example above is a specification of the generic TEBBE target energize, it is still remarkably unspecific and broad. She claims to behave positively, to be encouraging and to practice situational leadership in general at her mid-year review, and even though her positive, energizing role in a specific task force and workshop are mentioned in the year-end appraisal, the description remains highly general.

The accounts in the PP forms made certain aspects of employee behaviour visible in new ways and put particular emphasis on encouraging behaviours that resembled OCB as described in the literature (e.g. Dekas et al. 2013). The issue of visibility was a concern of several employees, one of whom said: "You have to make sure that it [the desired behaviour] is visible. And when it isn't visible because you're not sitting beside your manager all the time when you work, you need to remember to make the manager aware of what it is …" (Researcher 16, IRDU, 2013).

TEBBE and the PP forms prompted employees to consider certain aspects of supporting behaviour as something they not only did, but also accounted for formally. For instance, as reflected in the following quote, helping a colleague now required thinking about how to make that visible: "You can say … If you help, I mean personally. If you help others then it feeds directly into your own TEBBE or the Balanced Scorecard. At least if you typed it in to make it visible" (Researcher 16, IRDU, 2013).

The screenshot below (in Figure 7) illustrates how an employee described, and hence made visible, her own energizing behaviour on her PP form:

Balanced Scorecard Perspective	Goal setting (December 1st to February 28th)		Mid-year review (June 1st to August 31st)	Year-end appraisal (December 1st to February 28th)	
	Balanced Scorecard CSF/KPI/Targets	Weight (%)	Comments	Comments	Rating (see scale above)
	through proactivity (ensure immediate attention to potential project issues)				
Supporting Behavioural target:	**CSF:** Ensure display of IRDU behaviour goal: **Energize** **KPI:** Express an encouraging mindset - actively participating in creating a positive atmosphere **Target:** Responsible manager, colleagues and stakeholders to experience; Energizing behaviour	10	**Employee:** Acting Project manager for specific project: practices situational leadership, appreciative and encouraging when issues arise. Participate in creating a positive atmosphere by being present, positive and by empowering the team members. **Manager:** Agree.	**Employee:** Coordination of Planning workshop, adhoc facilitator for visual board meetings. Has demonstraded "Energize" when working with Task Force and IRDU team members on the coordination of the specific study and etchant composition decision facilitation. **Manager:**	

Figure 7. Screenshot of a researcher's PP form (some phrases marked for the sake of anonymity).

The screenshot shows how this employee specified energizing behaviour by emphasising how she had participated "in creating a positive atmosphere by being present, positive and by empowering the team's members". This is a clear example of OCB as described by e.g. Organ (1997). However, the examples also indicate that impression management might be a consequence of formalising accounts of OCB, i.e. employees will focus on enhancing the image of their own behaviour in the eyes of the manager rather than on the behaviour itself (Bolino et al., 2013).

IRDU managers would, however, deny that the focus on behavioural targets has led to gaming and cheating:

> The only pitfall is that the framework might seem a bit frightening if you enter the organization from the outside. At least it is my experience that, after you have worked with it for some time, you cannot cheat with your behaviour. You can develop personally and you can avoid some of the bad behavioural habits you might have. But, in your professional life you cannot fake your behaviour. I mean, maybe actors can, but I don't even know whether they can 24 hours a day, or whether it's only when they're on stage. From my perspective […] my employees are happy to have the possibility to talk to each other about how we all behave (ResMan9, IRDU, 2013).

However, not all employees agreed with the manager on this issue. Fear of cheating, developing impression management strategies and perceived unfairness were also concerns raised by some employees.

5.4. Framing desirable behaviour in PRU

In the other BioTech unit under study, PRU, another way of framing the new dimension of behaviour emerged based on global framing but also included other devices and elements that resulted in a much different way of framing OCB than in IRDU. In the following we illustrate the differences by characterising the ways in which the three aspect of framing – dimensioning, measuring and managing behaviour – were undertaken in this business unit. Furthermore, we also characterise the employees' reactions towards the visibility the behavioural targets heightened to provide more insight into the tensions involved with framing OCB.

5.4.1. Dimensioning

While a primary concern in IRDU was providing descriptions of behavioural dimensions – expressed in the TEBBE framework – PRU addressed the question of specificity and measurability up front, thus framing the dimensions of desired behaviour differently. PRU did not develop a framework like TEBBE, but instead primarily applied BioTech's already existing BioSphere Framework in the framing of behavioural targets but also GP's guidelines for setting behavioural targets. In some PRU departments the identification of specific essentials of the BioSphere Framework was informed by the annual Employee satisfaction survey (e-voice), which asks employees to evaluate the performance of the organization on a variety of different parameters linked to the BioSphere value framework. As part of the survey employees had to rate the performance of their first line manager. According to an interview with a PRU HR business partner, the essentials that received the lowest scores were more likely to be chosen as the themes for the upcoming goal setting process. Thus the BioSphere value framework and the employee survey were

important material organizational devices that helped frame behaviour as a performance measurement object in PRU and helped to establish boundaries that would define what to take into account and what to leave out (Callon, 2007).

The organisational "Essentials" of the BioSphere Framework was important for pointing out core themes related to PRU behavioural targets, but they were also seen as difficult to operationalise and further local specification was considered necessary. As a means to connect the essentials to a more specific level, a Competence Catalogue developed by GP was circulated with the declared aim of inspiring managers and employees to formulate good behaviour targets. The catalogue described a range of key actions relating to 21 individual sub-themes categorised into four overall domain definitions: interpersonal, leadership, business management and personal attributes. Thus the catalogue offered specific competence descriptions. For instance, the sub-theme of "innovation" – which matched one of BioTech's Organizational Essentials and was categorised under personal attributes – suggested the following key actions to inspire the goal-setting process: "[The employee] evaluates multiple solutions – Examines numerous potential solutions and evaluates each before accepting any" (Internal document, PRU, 2013). The two examples below in Figure 8 illustrate how combined input from BioTech Essential no. 1, "We treat everyone respectfully" (cf. Figure 2), and support from the Competency Catalogue were used to frame specific behavioural targets in PRU:

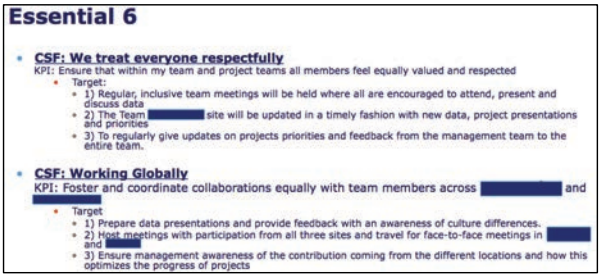

Figure 8. Example of a real behavioural target (of a PRU scientist), which was used for training purposes in PRU.

Thus, to behave in the right way did in PRU often become a matter of complying with what was framed as valuable competencies for the firm (in the competence catalogue) and this competence descriptions had a significant impact on the ways in which OCBs were articulated and constructed; to behave in an organizational citizenship-like way became a question of certain identifiable or manageable competencies that the individual employees either had or did not have. For example behaving in a respectful manner became a question of having certain team or cross-cultural competencies. In this way, OCB was instrumentalised by means of the competence descriptions and citizenship behaviour became diagnostic just like competencies. This diagnostic approach towards behavioural control was also emphasized by the fact that in some departments the dimensions of behaviours that were selected to be approached in the PP system were the ones that, according to the E-voice survey, had a low score. Thus, again an indication of the idea to key behavioural dimensions were something that could be identified by management and "managed by exception" – attention towards those aspects of behaviour which were underperformed.

5.4.2. Measurability

Measurability was perceived to play a major role in accounting for behaviour in PRU, which is reflected in the guidelines on how to develop behavioural targets, as shown below.

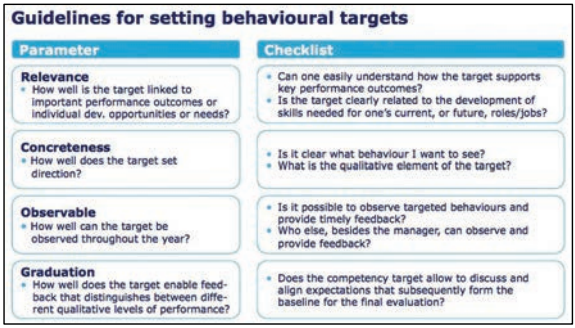

Figure 9. Guidelines for setting behavioural targets.

This guideline specifies that measures would need to be relevant, concrete, observable and that they should allow for an evaluation that distinguishes between "different qualitative levels of performance" (which is defined as the possibility of "Graduation", cf. Figure 9). In that sense, the *ex ante specifications* of desired behaviour that had also been part of the global framing and the Competence Catalogue contributed to the local framing in PRU. Behavioural targets became closely linked business targets and framed as a leading indicator for business targets (cf. the first bullet point in the figure below):

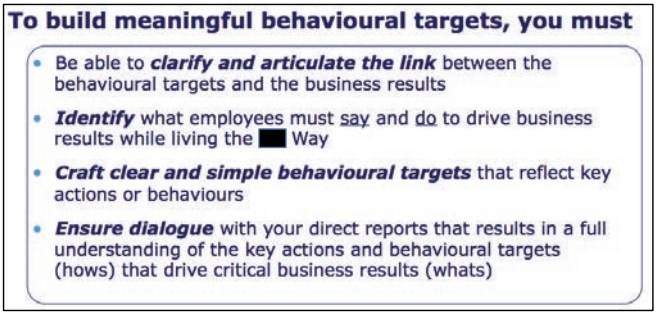

Figure 10. Building meaningful behavioural targets.

In contrast to IRDU, the local framing in PRU was an attempt to specify and clarify desirable behaviour ex ante on a highly detailed level. Like IRDU, the question of measurability was seen as important but also quite difficult to manage in practice. This is reflected in the following quote, where another PRU HR partner questions the benefit of ex ante specificity and quantification of behavioural targets even though doing so would make measurements easier:

> [P]eople want [definitions], of course they do. But here we also get into more and more trouble, because sometimes it's very difficult to define things very, very precisely. For instance, what does it mean to be more proactive […]? I mean, we talked about how you can get out of this trouble by saying 'well, you need to initiate three things' or something like that, right? But, it's definitely an exercise for all of us to become clearer during this [process]" (HR Partner 3, PRU, 2013).

The HR Partners recognised the challenges involved in specifying and measuring behaviours. Their reflections on how such initiatives affected employee performance, however, differed. Everyone seemed to agree that, in order to take the system seriously, employees had an urge to make the behavioural targets tangible and objectively measurable. It was also recognised, however, that doing so was quite difficult:

> Personally, I think it was a good idea because it allows for the discussion of difficult subjects. It's extremely difficult to make things measurable and to write them down (in the PP form) properly and so on, but it allows us to formally emphasise the soft values, and we actually do that. I mean, when we appraise people's PP we have always emphasised … It's not good enough if you've done everything if you also haven't helped anyone with anything" (Research Manager 4, PRU 2012).

Although it was recognized that it was difficult, there was a clear aspiration among managers in PRU to specify and make behaviour measurable ex ante. Thus, the ways in which managers made behaviour calculable should be clear for the employee already in the early stages of the PM cycle (the goal setting stage). This way of quantifying behaviourdiffered from IRDU where the managers rating was based on his or her appraisal of the employees' own accounts (self-reporting) and conducted *ex post*. The aim in PRU was to use such quantification as a way of directing the employees behaviour and therefore also a higher degree of formalization when it comes to managing OCB.

5.4.3. Managing

In relation to the problems involved in measuring OCB performance, research managers and HR Partners also recognised that managing the use of behavioural targets was difficult. Although PRU had put an effort into quantifying and making the new concept measurable, making employees feel accountable for living up to the desired OCB measures appeared to be a recurring problem:

> I can see that there are areas in our organization where the behavioural target policy has not become very successful […] and where the managers just roll their eyes and where I have to say: 'Hey guys, you really have to make this thing alive'. I mean, it's definitely not the system that's the problem as such. It's your dissemination of it, your way of handling it. Now, you really have to pull yourself together and be focused on the task. And then you'll need to find your own way of talking about this out there. There's no right or wrong way of doing this. *They just need to be able to tell their employees what we measure and how*. And it's [the manager's] job to tell people how [they] should be able to recognise this in their everyday work: 'Can I have some examples that show that you did this or that, how can I see that you do those things, right'? (HR Partner 2, PRU, 2014, emphasis added).

As a consequence of these problems the PRU HR Partner quoted above identified a need for specifying the measures of behavioural targets even more, as well as a need for managers to monitor their employees more closely to make sure they worked properly with behavioural targets.

Thus, in addition to the other aspects of the framing in PRU, which related to identifying and measuring OCB, there was also a clear indication what the managers' role were in order to succeed with OCB performance measurement: It was to take the system seriously and allocate enough resources towards developing the measures - not succeeding with the new type of performance measures was in PRU conceived to be a question of not having allocated enough effort and resource to the attempts to measure and quantify OCB in the goal setting stage of the performance management cycle. This idea contrasts the dominating idea in IRDU where it was the subject in it self (OCB) that were conceived to explain why attempts to measure and quantify OCB ex ante often failed.

5.5. Tensions and concerns

Some interview respondents were quite critical towards the idea of measuring behaviour and making it a part of the formal performance management procedure. One respondent told us: "I think some people will think it somehow childish. I mean, because of course you have to behave properly when you're at work, right" (Research Manager 1, PRU 2012). In a similar manner another researcher called the idea behind behavioural targets patronising, stating:

> Who decides what the right behaviour is? I mean, I guess it's obvious for everybody if someone is completely impossible to work with or if someone is negative. (…) The bosses can lean on PP, but, I mean, this is not how … you need to have a feel for people if you're a good boss and then you have to have a dialogue with your employees. (…) You should be able to discuss stress and have a dialogue and communicate with each other, but I don't think it belongs in a PP system (Researcher 6, PRU 2012).

The following excerpt from a group interview illustrates how the call for specificity was prevalent before the four rules were significantly focused on by the PRU HR Partner group:

> **Researcher 11:** So, I found a good target on the list. In a way I think it's kind of "bullshit" like, you know. Because of course we all behave properly. (…). A lot of the descriptions are, like, social characteristics, right? (…) And you can't just start changing people.
>
> **Researcher 13:** But they're not all social characteristics. Some of [the behavioural targets] also describe how you act, for instance with regard to whether you remember to include colleagues in discussions at meetings, remember to inform about this and that. Some of them were a bit more elaborate … but anyway.

While the PRU HR Partner group had adjusted its framing to fit the call for more specificity, this seemed to produce other problems and frustrations.

> You might get this target on knowledge sharing on your PP form, but you know what? Everyone knows that knowledge sharing doesn't count as much as a result. And how would you even measure knowledge sharing? Not really possible, right? No one will ever know if I don't stop somebody from making a mistake. And if I even do that, of course I wouldn't walk up to my manager's office and say: 'Yesterday I just stopped a mistake!' I mean, for God's sake, it'll never be measured anywhere […]. I actually have some incidents where I helped somebody, and in the end they just took all the credit for it, right. And that's f … annoying. Here, it would be more OK if we didn't work under the pressure of high performance (Researcher 10, PRU 2012).

This researcher argued that the PP policy indirectly caused an unfortunate situation. A colleague who wanted to be recognised by the manager took sole credit for an activity, even though the researcher interviewed had also contributed to it. As a consequence, and due to the fact that knowledge sharing activities were seen as "not really counting" and difficult to measure, he concluded that he would not help her out next time. In another interview a researcher stressed that the more visible aspects of behaviour, but not necessarily the most important ones, often seemed to be prioritised: "I don't know whether this is the right way to educate people […]. But, well, of course, it makes it easier to find somebody who's willing to arrange our next Christmas party and stuff like that. If you do that, you can suddenly write that [on your PP form]" (Researcher 9, PRU, 2012).

A researcher who described how she had actually managed to formulate a behavioural target, which had made sense to her although it was not specific or measurable, also identified a potential

problem with the tendency described above. However, she found it stimulating to identify and focus on while she was somewhat disappointed that it did not qualify as "best practice" according to the four rules communicated by the PRU HR community:

> I have chosen to formulate a kind of 'self-development target', which is, however, very difficult for my manager to evaluate. Of course I can reflect a bit upon it and say 'I feel this or that', right. But, in that regard it is not a very useful target (Researcher 13, PRU, 2013).

A problem that emerged as a consequence of the quest to measure behaviour ex ante was that the difference between business targets and behavioural targets blurred. It seemed that what the organization intended to value was impossible to put into an adequate, concrete form or to specify as targets that could make individuals adequately accountable for producing the intended qualities. There was a risk that behavioural targets would "just become like new business targets" (PRU HR Partner 3, 2014). As noted by HR Partner 3 there was an inherent paradox in wanting to recognise the importance of *other* aspects of performance than results while at the same time specifically wanting to make these other aspects quantitative. In this way, what makes such alternative aspects or processes valuable might risk becoming compromised; organizational results (performance) would risk to being reduced:

> So, how should I be 'more proactive' or how should I 'take more initiative', or how should I 'be more *communicative'* or something else, right? It ends up being a target… [for instance] *I need to deliver at least three presentations* […] at department meetings during the year, right? And then someone says 'yes, then you definitely achieve your targets; you've been 'communicative'. *But is that good enough*? What about the quality of what I stand up and say? I think, 'I'm there', 'I stand

here and point while saying something'. *But does doing this three times make me a better communicator?* This is where it's still a little bit difficult (HR Partner 3, PRU, italics added).

The problem with behavioural targets having a role as a leading indicator for a business target is that the behavioural target then becomes identified as an extension of the business target, which reduces the discussion of performance to a matter of results and how to achieve results. It becomes a matter of e.g. the number of meetings held for employees or the number of times stakeholders have been visited. Thus, this type of framing of behavioural targets risks translating qualitative discussions of intangible aspects of performance (and OCB behaviour) into activities of little value by making these concerns into calculable procedures. Consequently, a more varied debate on 'performance' risks being abandoned, even though the initially declared purpose of introducing behavioural targets was to increase performance by recognising that performance cannot be understood as results alone, that performance is also about process. Conceptualising behavioural targets as a leading indicator, however, projects the discussion of performance on the same dimension. Compliance with corporate and societal values is not necessarily the same as making them a leading indicator. In the case of PRU, at least the conceptualisation of behavioural targets as a leading indicator was a boundary setter that constrained the discussion of performance to something relatively easily linked with business results.

6.0. Concluding discussion

The analysis of initiatives concerning the new behavioural targets at BioTech provides significant insights into attempts to formalise OCB. In the following, we summarise how the global and local framings of behaviour in the organization constructed the formalisation and how these frames proposed ways in which OCB could be dimensioned, measured and managed.

Studying the interdependence of the global framing and the two local framings provides additional insight into what it means to cascade the new performance dimension from the top of and throughout the organization. The fact that we refer to a *global and* a *local* framing of behavioural performance indicates that local business unit managers had significant leeway to shape the framing of the OCB in their individual performance management practice. Intriguingly, local managers in the two business units ended up framing OCB in two quite different ways. The wide span between the two framings is interesting because it increases understanding of the multiplicity and variability that were possible within the standards and requirements GP proposed.

Notably, cascading and integrating OCB as a new performance dimension in the performance management system is more than just a matter of finding the right performance measures at the local level. At the local level much effort was also devoted to dimensioning behaviour (defining its qualities), findings ways to get from the qualities to the quantities (identifying the right processes for quantifying the object) and suggesting managerial roles related to OCB management. Hence, the framing involved many more elements and devices than the ones GP suggested.

Table 2 below illustrates the global framing of OCB that the initiative concerning behavioural targets at BioTech resulted in. The table also includes key elements in the two framings that formalised OCB in the two business units studied. In particular, our study concentrates on the type of behaviour that was clearly related to OCB. We also focused on specific devices and elements used to formalise this type of behaviour. Hence, the aim of the analysis was to understand the various aspects used to frame this type of behaviour performance rather than understanding the extent to which the idea of OCB introduced in BioTech represented all the different dimensions of OCB found in the literature. The focus was on issues related to making OCB calculable and

manageable rather than on defining the scope and content of the notion of OCB. The discussion of our findings refers to OCB_{IRDU} and OCB_{PRU}, which pertains to framings of behavioural performance with a clear reference to types of behaviour the literature refers to as OCB.

The two local framings of OCB as a new performance measurement object were based on elements developed at the corporate level (the global framing), but more elements were added in the two distinct local framings. As a result the object turned out to be distinctly different in the two local settings, demonstrating the malleability of the object, which was not a fixed entity to be implemented, but a provisional entity that continued to be in the making.

OCB_{IRDU} represented an evaluation of OCBs based on the individual employee's report of what he or she believed was desirable behaviour according to the behavioural goals conveyed by the TEBBE framework, e.g. being pro-active, constructive and energizing. These assessments were based on the employee's own ex-post accounts of his or her past performance. Thus the evaluation can be described as a reflection rather than an explanation of any variance in the goals. The manager's judgment and calculation of the individual employee's behavioural performance is based on employee self-reporting and ex-post rationalisations. The dialogue between the manager and the employee at the one-on-one meetings based on self-accounts acted as the basis for rating the employee. The manager could, of course, challenge the employee's self-assessment but the employee's self-reported performance rather than compliance or non-compliance according to a pre-defined performance standard primarily functioned as the point of departure for the performance appraisal.

Table 2: Global and local framings of OCB at BioTech:

		$OCB_{Local\ (IRDU)}$	OCB_{Global}	$OCB_{Local\ (PRU)}$
Framing	*Dimensioning behaviour*	The TEBBE framework translates the BioTech essential into a local setting. TEBBE further specifies what the behaviour means according to The BioTech Way, which identifies six behavioural goals for IRDU employees. Seminars and workshops were conducted to strengthen the TEBBE framework.	Introduction of the *how* dimension in addition to the *what* dimension underlines that both the results achieved *and* how the employee behaved to achieve play a role. The BioTech Organizational Essentials contain OCBs for inspiration e.g.: "We treat everyone with respect" and "We have a healthy and engaging working environment" The essentials are characterised as minimum standard operating procedures for local units	The Organisational Essentials in BioTech's value framework play a highly visible, key role in identifying PRU employee behavioural goals. The first line manager can freely choose the essentials with respect to which ones to include in the behavioural $targets_{PRU}$. The essential(s) represented in the behavioural $targets_{PRU}$ often vary from year to year. Managers often used Employee satisfaction surveys (e-voice) to prioritise their choice of essential(s).
	Measuring behaviour	Self-accounts: Employees are asked to report examples that illustrate their performance according to the behavioural goals from TEBBE qualitatively to the managers on the PP form. The managers then – ex post – convert the employees' qualitative accounts into numerical ranking. Specification of what exactly the behavioural goals mean for the employee beforehand and expressing them quantitatively ex ante is assumed to be a difficult task for managers.	OCBs are portrayed as a type of behaviour that can be measured and accounted for. The behavioural dimension of performance is included in the PP system and the performance management cycle.	Making behavioural goals concrete, observable and measureable (i.e. "the four rules") and including them in the PP system is assumed to be possible. Thus ex ante specifications of behavioural goals are assumed to make it possible for managers to monitor and/or count the employee's behavioural performance according to a behavioural standard. The Competence Catalogue is used to provide suggestions for how managers can specify the essentials (behavioural goals).

	Managing behaviour	Managers review their employees' self-accounts and discuss the individual employee's performance with the employee at one-on-one meetings. The manager concludes his or her review of the employee's (ex-post) accounts in a rating of the employee's behavioural performance. Managers are presumed to have a coaching role. Managers are supposed to have healthy scepticism and reflectivity toward the options for quantify OCBs.	Managers take the lead in highlighting the importance of OCBs, especially in the annual performance appraisals. They make sure OCBs are put on the agenda when discussing and evaluating performance.	Managers evaluate their employees based on the managers' monitoring and/or counting of their employees' performance, according to the behavioural standards (specified ex-ante). The managers make their judgment and calculation based on their observations and registrations in a rating of the employees' behavioural performance. Managers are presumed to take a diagnostic and monitoring role. Managers are supposed to take the OCB numbers literally.
Consequences		Intense dialogue among employees and managers with respect to the behavioural goals and workshops seems to strengthen the development of a common understandings of the OCBs. Many employees thought the self-reporting practices and the intense dialogue on their behavioural performance in the one-on-one-meetings were a valuable feedback and coaching tool. Some employees talked about how they were motivated to produce good accounts with the aim of making their behaviour visible to their managers.		The constant striving to make behavioural goals concrete and measurable resulted in absurd cases. The standards turned out to be meaningless with no ability to coordinate behaviour. The behavioural targets sometimes ended up being measures of the transformation process or operational procedures, which direct attention away from the behavioural traits initially framed as the object of behavioural targets. Unsuccessful attempts to make behavioural goals measurable led to dissatisfaction with behavioural targets.

Note: The consequences of global framing (grey area) are not available since the study only characterises consequences related to local framings (no employees or managers in the study were exposed to global framing alone).

This reluctance toward further specification of a pre-defined standard for OCBs for judging behaviour is similar to a concept in the legal profession succinctly expressed by United States Supreme Court Justice Potter Stewart, who famously said: "I know it when I see it" to describe his threshold test for obscenity in Jacobellis v. Ohio (1964):

> I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it, and the motion picture involved in this case is not that.

The OCB_{IRDU} framing is grounded in the idea that further specification of the behavioural goals in terms of developing behavioural standard ex ante is not worthwhile. Discussion and reflection on specific examples and episodes conveyed by the employees are viewed as making more sense. In other words, the assumption appears to be that IRDU managers *would know it* when *they see it*, i.e. desirable employee behaviour.

Thus in many ways the OCB_{IRDU} is a paradox; it is a behavioural performance measure based on the assumption that it is *not* possible to measure behaviour. However, the way in which OCB_{IRDU} gets around this is that the measurement/quantification of behaviour is based on the manager's evaluation of the employees' ex post rationalisations of their own behaviour. The measurement is therefore not based on a managerial specification of a behaviour standard according to which the manager is prescribed to observe employee's behaviour. Instead, it comes at the end of the manager's assessment of the employee's self-account and the manager's dialogue with the employee.

The OCB_{PRU} was framed differently. PRU substituted self-assessment with management monitoring while ex-post accounts of performance were substituted with ex-ante specification of performance.

PRU emphasised the observability and concreteness of behavioural targets because "the four rules" were an important part of the framing. The idea was that it was possible to specify for everyone what, for example, 'innovativeness' means and to make it concrete and even observable for the manager. Thus the general idea in this framing was that the manager would be able to observe the behaviour of the employee and decide whether there had been compliance or non-compliance with the behavioural standard.

In other words, there was a much more rational expectation of the ways in which behaviour could be controlled. The ex ante specification of the behavioural aspects was conceived to be an essential element in the control system because it was the comparison of the actual behaviour of the employee with the standard specified at goal setting that was considered to be the basis for control. This was also reflected in the constant call for measurable and concrete behavioural targets in PRU. The PRU managers and employees seemed to be "caught in a rational/diagnostic control rhetoric" in which the only way to control behaviour was by means of ex ante specifications of the behavioural target and then a managerial assessment of the employee based on the manager's monitoring of employee behaviour.

6.1. Consequences of the formalisation of OCB at BioTech

Our study illustrates that framing behavioural control is never complete but leads to various unexpected tensions and consequences for employees and managers. According to our observations, OCB_{IRDU} framing seemed more robust than OCB_{PRU} framing, which encountered more resistance along the way. It is beyond the scope of this paper, however, to judge to the extent to which this was an expression of success or failure. Instead, we map some of tensions that arose when OCB_{IRDU} and OCB_{PRU} were introduced.

OCB_{IRDU} turned out to have some quite distinct effects in the organizational unit where it was introduced. Our study showed that the self-appraisal practice concerning OCBs, which initiated significant ex-post reflections for many employees, produced a vast amount of examples and discussions concerning behaviour. This had two interesting effects. First, some employees felt a greater sense of competence, which in turn had a motivational effect. Second, the dialogue that developed among managers and employees during one-on-one meetings involved the meaning of the different TEBBE values. For example, our analysis showed how the perceived vagueness of the value "energize" ended up being much more understandable for both parties when the employee and the manager discussed it. The agreed upon definition of 'energize' was 'close contact with stakeholders' and even produced a new type of accountability where the individual employee sought feedback from stakeholders.

OCB_{PRU}, however, produced an effect of a somewhat different nature compared with OCB_{IRDU}. First, the constant striving towards increased measurability of the behavioural goals seemed difficult. Measuring the behavioural goals turned out to be extremely difficult and many goals ended up in behavioural measures that were more like SOPs or ticking boxes, which had little value in terms of guiding employees about what was desirable and what was not for the firm in terms of the more intangible, organizational citizenship-like behaviour aspects of the employees' behaviour. Second, the many failures in terms of making behaviour more measurable also led to dissatisfaction with the behavioural targets and a somewhat negative effect on motivation.

Drawing on Callon's (1998a, 1998b) framing concept we show how OCB becomes meaningful in practice (or the opposite) through complex managerial and employee relations, which relate to aspects of dimensioning, measuring and managing framing activities. Depending on how these

framing aspects unfold, the OCB results in a variety of different tensions and effects. OCB_{IRDU} and OCB_{PRU} represent two alternative framings of what the literature has characterised as subjective performance measures (e.g. Bol, 2008). Self-assessment and ex-post accounts of behaviours played a significant role in the framing in IRDU whereas manager monitoring and ex-ante specification of behaviour were emphasised in PRU.

In sum, this study contributes to the practice-based, ANT-inspired accounting literature that focuses on accounting objects in the making (Callon, 2009; Chua, 1995; Preston, Cooper, & Coombs, 1992). These studies all show that relatively abstract accounting ideas gain a new, unpredictable reality when they are translated in specific situations (Justesen & Mouritsen, 2011). We add to this stream of literature because our study shows how specific framings outline spaces of calculability where both employees and managers become calculative agents who try to manoeuvre within this space and by offering greater insight into what it means to make discretionary and informal behaviour calculable and manageable.

[Paper three ends here. References appear at the end of this thesis]

9. Concluding discussion

This thesis offers some conceptual and empirical perspectives, which stimulates theoretical developments of and practical contributions to how PM is constituted in and constitutes practice. The purpose of this chapter is to recapitulate and discuss the main findings of this thesis, as well as to elaborate on its theoretical and practical contributions before the chapter is wrapped up with a conclusion. Given that this is an article-based thesis, the purpose of this chapter is also to discuss the articles' relations to each other, as well as each of their main findings. This is done rather briefly, however, as each of the individual articles also includes a discussion chapter. In this

discussion I attempt to identify and discuss not only the shared focus points of the articles, but also how they differ and how they have different theoretical and practical implications.

The articles can be seen as individual components that interact and make up a whole, suggesting that this thesis resembles an "imbrication" that is accomplished by the articles. As suggested by Taylor (Taylor, 2011b, p. 1279), imbrication is used to analytically present[28] what happens when various actors become part of the same entity through iterative processes of translations. Leonardi (P. Leonardi, 2011) and McPhee and Iverson (2013) further clarify that the concept of imbrication is derived from the name given to roof tiles used in ancient Roman and Greek architecture (P. Leonardi, 2012, p. 36), and that imbrication is the process of "tiling" such that specific enactments of joint relevancies become connected (McPhee & Iverson, 2013, p. 122). These *joint relevancies* are their shared empirical interests (ibid.), exemplified by the way each of the papers studies in detail how various PM elements appear in their practical settings.

When assembled in this thesis, the papers constitute analyses that can be understood as forming imbrications. Furthermore, imagining the three articles as roof tiles allows one to visualize how this thesis acts on the empirical phenomenon of PM. Through the many lines of reasoning, narratives and theoretical perspectives, arguments have been put forward that suggest that PM should be understood as being *constituted in and through communication* and that, simultaneously, PM takes part in *constituting* processes of organizing in complex organizational settings. The following paragraphs describe and discuss the implications of *how* this thesis has offered different perspectives so as to elaborate on these arguments.

[28]I use the word *present* as I agree with Latour (1988) that we cannot merely *describe* anything but "perform, transform, deform, and thereby form and inform ourselves" (p. 228).

9.1. PM studied from three different perspectives

All three articles illustrate how particular ways of presenting PM also shape what PM becomes and does in practice. While Paper 1 and Paper 2 study these processes from a communication perspective, primarily offered by CCO literature (e.g. Cooren et al., 2011), Paper 3 draws upon Callon's concept of framing (1998a; 1998b). The communicative interactions that are studied in Paper 1 and Paper 2, however, could have also been described with this concept (and with the twin concept of overflowing). Likewise, Paper 3 could have studied how behavioural targets reveal different characteristics in the organization through the analytics of the CCO perspective; Behavioural targets, for instance, appeared in different conversations across the organization which shaped the way the phenomenon emerged. I find that the CCO perspective has a particular analytical strength in that it allows the analyst to describe empirical situations in detail while paying attention to how these events are characterised by dialogue, interaction and development. These analytical opportunities have been crucial in making sense of the empirical material of Paper 1 and Paper 2. By contrast, Callon's (1998a; 1998b) concepts of framing and overflowing allow the analyst to work across the empirical material in a way that is less detached from the specific empirical events. In addition, Callon's analytical framework offers the possibility of describing the way different framing initiatives act in calculative ways and how they sometimes appear as calculative devices (i.e. performance matrices, the TEBBE-framework, etc.).

The development of the three papers can be understood as moving from describing how *PM* is made through *events* (Paper 1), to how PM shapes processes of *innovation* in particular events (Paper 2) and, finally, to how behavioural targets are made into different phenomena depending on their local *framings* (Paper 3). For all three articles, the practical role of PM has remained central for how their analytical inquiries were made.

The first article elaborates on how behavioural targets are constituted through communicative interactions in and between communicative events in one particular part of the organization. The second article illustrates how PM shapes the organizing of innovation in the research organization. This article includes an empirical scope, which is a bit broader than the first article. Lastly, the third article moves the analytical perspective into a more comparative approach by studying the making of behavioural targets in different organizational units within the research area. The more comparative approach of the third article emphasises the interviewees' voices, whereas the other two articles both rely on empirical observations to a larger degree. Empirically, all the papers relate and interact: In the first and the third articles, the empirical phenomenon of *behavioural targets* is studied in detail; that is, the way this measure is constituted and how it works differently depending on its relations. By contrast, the second article studies the role of PM more broadly by focusing on how the interactions between PM elements and the laboratory shape processes of *organizing innovation*.

9.2. Theoretical implications

Although their epistemological approaches differ to some degree, the articles share ontological assumptions. Likewise, all three papers study PM in different practical settings, and they all approach these practical settings from constructivist perspectives. In addition, all three articles are inspired by ANT's principle of symmetry (Latour, 1996), which recognizes that it is not only human activities, such as a manager's feedback, but also non-human elements, such as PM forms or templates, ventilation systems and PowerPoint slides, that are, in principle, equally significant in the making and doing of organizing processes.

One could argue that the specificity of the articles' analyses, combined with their descriptions of how "mundane" organizational elements took part in making these specificities, has produced three

articles that are preoccupied with describing "local accomplishment[s] of practice[s]", without considering their broader organizational relevance (Nicolini, 2009, p. 1392). While acting in the field, and while composing the articles in this thesis, however, my co-authors and I have considered it very important not to fall into this trap of merely describing details without considering their broader relevance for conceptual and practical PM development. The articles' shared ontological assumptions (e.g. that they study the empirical material with anti-essentialist approaches), combined with ambitions for being empirically specific, have helped to produce a set of texts that are relevant for organizations occupied with developing or using PM systems.

While the constructivist perspective of this thesis makes a set of assumptions that can be used to approach the empirical material and to problematize the cases, this thesis also represents the general claim that PM systems are not merely instruments that can work independently of their organizational settings, nor are they instruments that can be understood based on their formal descriptions. Rather, PM systems and practices can be seen as constructs that are constituted through communication, or through framing activities. Based on this basic premise, one foundational claim made in this thesis is that it takes time, effort, money, reflections, deference and obsequiousness to make PM systems work in practice.

9.3. Practical implications

In the introduction, I spent several pages describing my interest in studying PM in the making, as well as its practical uses, but when all is said and done, a relevant question to pose now is whether this study has had any practical impact. In order to answer this question, I define "impact" as signifying whether my research activities at BioTech have resulted in any visible changes with regard to how people discuss, understand, conceptualize, facilitate and further develop activities related to the subject of PM. Based on this definition, my answer is: "Yes, my studies have had an

impact at BioTech". The relevance and size of this impact is, however, up for discussion, which is exactly what the next paragraphs attempt.

Throughout my studies, I have acted as an input provider at specific events, sometimes within the GP department and sometimes in other areas of the organization. My work activities at BioTech can be categorized into two different "spheres": The "primary sphere" which refers to my formal workplace in the corporate HR division in the GP department, and the "secondary sphere" which refers to the research areas where I did most of my "core" empirical data collection. My studies have had different types of impact in each of these spheres. In the research organization, I believe that I have had the most significant impact, as I have had relatively close relationships to several HR partners from the different areas, as well as to some of the research managers. Based on these relations, I at one point got to present some of my findings for one of the research areas' management teams. At this event, I presented some of my interview findings from PRU and elaborated on *forced distribution* of performance ratings, a subject that has not been described very much in detail in this thesis. It basically refers to a centrally defined distribution of the ratio of good and bad annual performance ratings in some areas of BioTech. In Paper 2, we briefly touch upon this subject (p.) when describing how this particular policy seemed to distort common grounds and produce negative competition in the relevant areas. At this presentation, I recommended that the management team change this policy, to which the team members present reacted positively. However, I was later informed by one of the HR partners that the Senior Vice President of PRU did not yet want to change the policy. This point both emphasises and problematizes one of the main discussions produced in this thesis: The question as to how to set the framework for what counts as an effect. I believe that I have definitely planted "a seed" in the minds of several management team members. I also know that my PPT presentation is saved on a shared disk, which is accessible for

the management board members. Hence, the team members have a chance to reinvigorate their discussion by bringing my past arguments into potential future events. This could be a chance to establish more durable relations, which, again, might produce even more tangible effects in the future. Likewise, I have given other presentations for the HR partner teams of the research areas and given the HR partners individual feedback on specific subjects. The subject of *behavioural targets* has, in particular, been perceived as a relevant point of discussion, both in the research areas as well as in corporate HR. At different events, I have communicated some of the main points of Paper 3 and, for instance, exemplified for the audience of various Corporate HR partners that looking back in time, in order to formulate behavioural targets that will be evaluated, produces very different effects compared to practical attempts to look into the future when formulating relevant goals. One of the events I presented these ideas at, along with a colleague from GP, was a so-called Lunch & Learn seminar in corporate HR for an audience of HR leaders and HR partners. It is somewhat difficult to determine, however, what the possible effect of these seminars was; in contrast, it is easier to translate the feedback that I got when I contributed to, for instance, a meeting on PM, where feedback was instantaneous. In the GP department, I think that some of the conversations I had with those colleagues who are part of global PM development at BioTech have shaped how they think about and approach the subject of PM. However, this learning definitely goes both ways. I have learned a lot from many interesting and stimulating conversations around the subject of PM in the GP department. Although these activities have not rendered any hard-core evidence that my studies have impacted on practice, I remain optimistic that my findings have meant something. However, time, talk, and possibly artefacts as well, will tell.

9.4. The relevance of the mundane

All three articles presented empirical cases that illustrated how seemingly mundane empirical phenomena proved to have a significant impact on the way PM was *constructed*, as well as the way

PM contributed to *constructing* its surroundings. The effects of these mundane phenomena were described with different analytical vocabularies, from management accounting studies, from CCO literature, and with the concepts of framing and overflowing. Paper 1 unpacked the organizing roles of artefacts, text, and talk in developing a new performance measure. It demonstrated how efforts to constitute enabling PM measures in specific communicative events were shaped by relations between these communicative elements (such as the "WHAT" and "HOW" model, Figure 4 of Paper 2). Qualities (or effects) of PM systems can be understood as being constituted through such communicative elements or merely through communication. Likewise, the performance measure interacted with its users in a very different way when the relations between artefacts, texts, and talk offered spaces that could more easily be made operationable and managed. Naturally, these new opportunities did not come out of the blue. They were products of conversations between HR strategists, external consultants, research managers, and possibly scientists as well. But the mundane artefacts such as figures appearing in PowerPoint slides seemed to influence how critical feedback was produced and, hence, how new and seemingly mundane artefacts were made, which radically changed the practical appearance of the new PM policy. In a similar vein, Paper 2 illustrated that the mundane appearance of a ventilation system, when studied in retrospect, had actually had a major impact on the development of the innovation processes in PRU's SCR department. Hence, it illustrated how "texts" form "conversations" in and between events, all of which constitutes organizing. Paper 3 illuminated some related effects when describing how, at least on the surface, the standardized PM element of the PP form proved to activate its users in very different ways, depending on how the first-line managers framed the guidelines that employees should follow. With empirical relatedness to Keith Robson's seminal work on how accounting numbers can "act at a distance" (Robson, 1992, p. 702), Paper 3 showed how past events were represented through communicative events. From this perspective, it exemplified the way effects of

such acts from different lengths of distances (from Corporate HR to local research departments and from research managers to scientists) depended heavily on whether individuals were demanded to formulate behavioural targets based on their past achievements (ex post) or whether they were asked to predict relevant behavioural targets (ex ante). This could initiate a discussion on the relevance of studying the degree to which individuals should be formally required to produce their own narratives, which relates to several contributions in accounting on the role of calculative selves (Boland, 1994; Miller & O'Leary, 1987, Miller, 2001; Roberts, 2001; Boland & Schultze, 1996). So what can we learn from this? Does the mundane challenge how organizations organize PM? My brief answer is, yes. A recurrent point drawn from the conclusions of the three articles is that strategists, consultants, managers and employees should, in the best of worlds, critically reflect upon how the mundane possibly plays a role in the organizing of control. These mundane elements, however, do not necessarily have to belong to what is formally known as PM system elements. We have seen how PPT slides shaped the development of behavioural targets (Paper 1), how scientific models and aspirations were challenged by ventilation systems (Paper 2), and how PP templates, performance matrices and activities related to shared documents had an impact on the way new PM practices unfolded in complex organizational settings (Paper 3). Based on the claims of Papers 1, 2 and 3 that have already been reviewed in these paragraphs, the next paragraph discusses in more detail how the use of PM at BioTech has generated examples of organizational paradoxes related to the development and use of PM.

9.5. Concluding remarks

All three papers present empirical cases that illustrate *how* efforts to measure performance produce realities that, in different ways, radically change the appearance of central empirical phenomena. Communicative elements and events seem to produce multiple but sometimes paradoxical organizational effects. The making of opposites or organizational paradoxes could qualify as

headlines describing the empirical events that unfold in Papers 1, 2 and 3. From one perspective, Paper 1 could be described as an illustration of how efforts to produce enabling PM measures resulted in the making of the coercive effects; hence the opposite of what was intended. From another perspective, the same empirical narrative could also be interpreted as an example of how HR strategists and consultants managed to re-shape the performance measure into becoming enabling, however, by shifting the logic that defines the principles of measuring performance. The paper demonstrated that the formal presentation of behavioural targets was changed in order to better fit the "thinking" and "acting" of research managers. Paradoxically, this development built upon HR's translations, which were made based on feedback from specific communicative events where particular management-imposed artefacts (such as the "WHAT" and "HOW" model) seemed to play primary roles. In related ways, Paper 2 described how that which was intended to work as a "control object" to manage processes of innovation (the PP system) paradoxically ended up being overruled by what was intended to work as a "work object", the ventilation system. The ventilation system gained some significantly different characteristics, which proved to play a central role for the organizing of innovation. In Paper 3, a series of quite different "opposites" or paradoxes appeared based on its comparative studies of the way behavioural targets are differently framed in the research areas of PRU and IRDU. In PRU, behavioural targets were framed as being tightly coupled with requirements to make them *measurable.* In IRDU, by contrast, employees had only highly *ambiguous* behavioural targets to guide their attention. Paradoxically, these ambiguous accountabilities produced a much stronger presence of the behavioural targets in IRDU when compared to PRU. These empirical developments highlight the relevance of studying further the potential possibilities, opportunities and pitfalls related to using PM systems, numbers, indicators and measures that are incomplete (Dambrin & Robson, 2011; Jordan & Messner, 2012; Lillis, 2002; Mouritsen et al., 2009). I believe that each of the three articles comprising this thesis offers several

arguments and perspectives from many different theoretical positions, which can be used as input for the future development of research on PM in theory and in practice.

References

Abernethy, M. A., & Brownell, P. (1997). Management Control Systems in Research and Development Organizations: The Role of Accounting, Behaviour and Personnel Controls. *Accounting, Organizations and Society*, *22*(3), 233–248.

Abernethy, M. A., & Stoelwinder, J. U. (1991). The role of professional control in the management of complex organizations. *Accounting, Organizations and Society*, *16*(2), 105–120.

Adler, P. S. (2005). The Evolving Object of Software Development. *Organization*, *12*(3), 401–435. doi:10.1177/1350508405051277

Adler, P. S., & Borys, B. (1996). Two types of bureaucracy: enabling and coercive. *Administrative Science Quarterly*, *41*(1), 61–89. Retrieved from http://www.jstor.org/stable/2393986\nhttp://www.jstor.org.ezproxye.bham.ac.uk/stable/pdfplus/2393986.pdf?acceptTC=true

Ahrens, T., & Chapman, C. S. (2004). Accounting for Flexibility and Efficiency : A Field Study of Management Control Systems in a Restaurant Chain *. *Contemporary Accounting Research*, *21*(2), 271–301.

Ahrens, T., & Chapman, C. S. (2007). Management accounting as practice. *Accounting, Organizations and Society*, *32*(1-2), 1–27. doi:10.1016/j.aos.2006.09.013

Ahrens, T., Hansen, A., Panozzo, F., Granlund, M., Habersam, M., Chapman, C. S., … Scheytt, T. (2008). The future of interpretive accounting research—A polyphonic debate. *Critical Perspectives on Accounting*, *19*(6), 840–866. doi:10.1016/j.cpa.2006.07.005

Akrich, M., Callon, M., & Latour, B. (2002). The Key to Success in Innovation Part I, The Art of Interessement. *International Journal of Innovation Management*, *6*(2), 187–206.

Allen, T. D., & Rush, M. C. (1998). The effects of organizational citizenship behavior on performance judgments: A field study and a laboratory experiment. *Journal of Applied Psychology*, *83*, 247–260.

Amabile, T. (1996). *Creativity and Innovation in Organizations*. Boston, MA: Harvard Business School Press.

Andersen, N. Å. (2003). *Discursive Analytical Strategies: Understanding Foucault, Koselleck, Laclau, Luhmann*. Bristol: Policy Press.

Andon, P., Baxter, J., & Chua, W. F. (2007). Accounting change as relational drifting: A field study of experiments with performance measurement. *Management Accounting Research*, *18*(2), 273–308. doi:10.1016/j.mar.2006.06.007

Antle, R., & Demski, J. S. (1988). The controllability principle in responsibility accounting. *The Accounting Review*, *63*, 700–718.

Arya, A., Glover, J., & Radhakrishnan, S. (2007). The Controllability Principle in Responsibility Accounting: Another Look. In *Essays in Accounting Theory in Honour of Joel S. Demski* (pp. 183–198). New York: Springer Science & Business Media LCC.

Ashcraft, K. L., Kuhn, T. R., & Cooren, F. (2009). Constitutional Amendments: "Materializing" Organizational Communication. *The Academy of Management Annals*, *3*(1), 1–64. doi:10.1080/19416520903047186

Barnard, C. (1938). *The Functions of the Executive*. Cambridge, MA: Harvard University Press.

Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee "citizenship." *Academy of Management Journal*, *26*, 587–595.

Baxter, J., & Chua, W. F. (2003). Alternative management accounting research — whence and whither. *Accounting, Organizations and Society*, *28*, 97–126.

Baxter, J., & Chua, W. F. (2008). The field researcher as author-writer. *Qualitative Research in Accounting & Management*, *5*(2), 101–121. doi:10.1108/11766090810888917

Baxter, J., & Chua, W. F. (2009). Studying Accounting in Action: The Challenge of Engaging with Management Accounting Practice. In *Accounting, Organizations, and Institutions: Essays in Honour of Anthony Hopwood* (Vol. 0, pp. 1–24).

Berg, B. L., & Lune, H. (2012). *Qualitative Research Methods for the Social Sciences* (Eight Edit.). New Jersey, U.S.A.: Pearson Education, Inc.

Bergeron, D. M. (2007). The potential paradox of organizational citizenship behavior: Good citizens at what cost? *Academy of Management Review*, *32*, 1078–1095.

Berry, A. J., Coad, A. F., Harris, E. P., Otley, D. T., & Stringer, C. (2009). Emerging themes in management control: A review of recent literature. *The British Accounting Review*, *41*(1), 2–20. doi:10.1016/j.bar.2008.09.001

Bisbe, J., & Otley, D. (2004). The effects of the interactive use of management control systems on product innovation. Accounting, Organisations and Society. *Accounting, Organizations and Society*, *29*(8), 709–737.

Blackler, F., Crump, N., & McDonald, S. (1999). Managing Experts and Competing through Innovation: An Activity Theoretical Analysis. *Organization*, *6*(1), 5–31. doi:0803973233

Blaschke, S., Seidl, D., & Schoeneborn, D. (2012). Organizations as Networks of Communication Episodes: Turning the Network Perspective Inside Out. *Organization Studies*, *33*(7), 879–906. doi:10.1177/0170840612443459

Bol, J. C. (2008). Subjectivity in Compensation Contracting. *Journal of Accounting Literature*, *27*, 1–24.

Bolino, M. C., Klotz, A. C., Turnley, W. H., & Harvey, J. (2013). Exploring the dark side of organizational citizenship behavior. *Journal of Organizational Behavior*, *34*(4), 542–559.

Borman, W. C., & Motowidlo, S. J. (1997). Task performance and contextual performance: The meaning for personnel selection research. *Human Performance*, *10*, 99–109.

Brief, A. P., & Motowidlo, S. J. (1986). Prosocial organizational behaviors. *Academy of Management Review*, *11*(4), 710–725.

Burchell, S., Clubb, C., Hopwood, A., Hughes, J., & Nahapiet, J. (1980). The roles of accounting in organizations and society. *Accounting, Organizations and Society*, *5*, 5–27.

Burney, L. L., Henle, C. a., & Widener, S. K. (2009). A path model examining the relations among strategic performance measurement system characteristics, organizational justice, and extra- and in-role performance. *Accounting, Organizations and Society*, *34*(3-4), 305–321. doi:10.1016/j.aos.2008.11.002

Burney, L. L., & Widener, S. K. (2013). Behavioral Work Outcomes of a Strategic Performance Measurement System-Based Incentive Plan. *Behavioral Research in Accounting*, *25*(2), 115–143.

Callon, M. (1986). Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay. *Power Action and Belief a New Sociology of Knowledge*, *32*(4), 196–223. Retrieved from http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Some+elements+of+a+sociology+of+translation:+domestication+of+the+scallops+and+the+fishermen+of+St+Brieuc+Bay#0

Callon, M. (1998a). An essay on framing and overflowing: economic externalities revisited by sociology. In M. Callon (Ed.), *The Laws of the Markets* (pp. 244–269). Oxford: Blackwell Publishers/The Sociological Review.

Callon, M. (1998b). Introduction: the embeddedness of economic markets in economics. In M. Callon (Ed.), *The Laws of the Markets* (pp. 1–57). Oxford: Blackwell Publishers/The Sociological Review.

Callon, M. (2007). Actor-network theory: The market test. In K. Asdal, B. Brenna, & I. Moser (Eds.), *Technoscience. The politics of interventions*. Oslo: : Oslo Academic Press Unipub.

Callon, M. (2009). Civilizing markets: Carbon trading between in vitro and in vivo experiments. *Accounting, Organizations and Society*, *34*(3/4), 535–548.

Callon, M., Lascoumes, P., & Barthe, Y. (2001). *Agir dans un monde incertain. Essai sur la démocratie technique*. Paris: Seuil.

Callon, M., & Latour, B. (1981). Unscrewing the big Leviathan : how actors macro-structure reality and how sociologists help them to do so. *Advances in Social Theory and Methodology: Toward an Integration of Micro and Macro-Sociologies*, 277–303.

Chapman, C. S., Cooper, D. J., & Miller, P. (2009). Linking Accounting, Organizations, and Institutions - Essays in Honour of Anthony Hopwood. In *Accounting, Organizations, & Institutions* (pp. 1–22). Oxford: Oxford University Press.

Chapman, C. S., & Kihn, L.-A. (2009). Information system integration, enabling control and performance. *Accounting, Organizations and Society*, *34*(2), 151–169. doi:10.1016/j.aos.2008.07.003

Cheng, M. M., & Coyte, R. (2014). The effects of incentive subjectivity and strategy communication on knowledge-sharing and extra-role behaviours. *Management Accounting Research*, *25*(2), 119–130. doi:10.1016/j.mar.2013.07.003

Chenhall, R. H. (2005). Integrative strategic performance measurement systems, strategic alignment of manufacturing, learning and strategic outcomes: an exploratory study. *Accounting, Organizations and Society*, *30*(5), 395–422. Retrieved from 10. 1016/j.aos.2004.08.001

Christensen, M., & Skærbæk, P. (2007). Framing and overflowing of public sector accountability innovations: A comparative study of reporting practices. *Accounting, Auditing & Accountability Journal*, *20*(1), 101–132.

Chua, W. F. (1995). Experts, networks and inscriptions in the fabrication of accounting images: A story of the representation of three public hospitals. *Accounting, Organizations and Society*, *20*(2-3), 111–145.

Cooper, D. J., & Ezzamel, M. (2013). Globalization discourses and performance measurement systems in a multinational firm. *Accounting, Organizations and Society*, *38*(4), 288–313. doi:http://dx.doi.org/10.1016/j.aos.2013.04.002

Cooren, F. (2004). Textual Agency: How Texts Do Things in Organizational Settings. *Organization*, *11*(3), 373–393. doi:10.1177/1350508404041998

Cooren, F. (2006). The organizational world as a plenum of agencies. In F. Cooren, J. R. Taylor, & E. J. Van Every (Eds.), *Communication as organizing: Empirical and theoretical explorations in the dynamic of text and conversation* (pp. 81–100). Mahwah, New Jersey: Lawrence Erlbaum.

Cooren, F., Fairhurst, G. T., & Hüet, R. (2012). Why Matter Always Matters in Organizational Communication. In P. M. Leonardi, B. A. Nardi, & J. Kallinikos (Eds.), *Materiality and Organizing: Social Interaction in a Technological World*. Oxford: Oxford University Press.

Cooren, F., Kuhn, T., Cornelissen, J. P., & Clark, T. (2011). Communication, Organizing and Organization: An Overview and Introduction to the Special Issue. *Organization Studies*, *32*(9), 1149–1170. doi:10.1177/0170840611410836

Cooren, F., Matte, F., Taylor, J. R., & Vasquez, C. (2007). A humanitarian organization in action : Organizational discourse as a stable mobile. *Discourse & Communication*, *1*(2), 153–190.

Cooren, F., & Taylor, J. R. (1997). Organization as an Effect of Mediation: Redefining the Link Between Organization and Communication. *Communication Theory*, *7*(3), 219–260. Retrieved from http://doi.wiley.com/10.1111/j.1468-

2885.1997.tb00151.x\nfile:///C:/Users/osrrao02/Documents/forskning/j.1468-2885.1997.tb00151.x.pdf

Cresswell, A. M. (2012). Technology-as-text in the communicative constitution of organization', Information and Organization. *Information and Organization*, *22*(2), 154–167.

Czarniawska, B. (2004). On Time, Space, and Action Nets. *Organization*, *11*(6), 773–791. doi:10.1177/1350508404047251

Czarniawska, B. (2007). *Shadowing and Other Techniques for doing Fieldwork in Modern Society*. Frederiksberg: Copenhagen Business School Press.

Czarniawska, B. (2008). *A theory of organizing*. Cheltenham, UK: Edward Elgar.

Dale, K., & Burrell, G. (2008). *The Spaces of Organisation & the Organisation of Space. Power, Identity & Materiality at Work*. New York: Palgrave.

Damanpour, F. (1991). Organisational innovation: A metaanalysis of effects of determinants and moderators. *Academy of Management Journal*, *34*(3), 555–590.

Dambrin, C., & Robson, K. (2011). Tracing performance in the pharmaceutical industry: Ambivalence, opacity and the performativity of flawed measures. *Accounting, Organizations and Society*, *36*(7), 428–455. doi:10.1016/j.aos.2011.07.006

Davila, A. (2000). An empirical study on the drivers of management control systems' design in new product development. *Accounting, Organizations and Society*, *25*(5), 383–409.

Davila, A., Foster, G., & Oyon, D. (2009). Accounting and Control, Entrepreneurship and Innovation: Venturing into New Research Opportunities. *European Accounting Review*, *18*(2), 281–311. doi:10.1080/09638180902731455

Davison, J. (2011). Paratextual framing of the annual report: Liminal literary conventions and visual devices. *Critical Perspectives on Accounting*, *22*(2), 118–134. doi:http://dx.doi.org/10.1016/j.cpa.2010.06.010

Davison, J. (2014). Visual rhetoric and the case of intellectual capital. *Accounting, Organizations and Society*, *39*(1), 20–37. doi:10.1016/j.aos.2014.01.001

Dechow, N. (2012). The balanced scorecard: subjects, concept and objects – a commentary. *Journal of Accounting & Organizational Change*, *8*(4), 511–527. doi:10.1108/18325911211273509

Ekman, S. (2014). Is the high-involvement worker precarious or opportunistic? Hierarchical ambiguities in late capitalism. *Organization*, *21*(2), 141–158. doi:10.1177/1350508412473672

Engeström, Y., & Blackler, F. (2005). On the life of the object. *Organization*, *12*(3), 307–330. doi:10.1177/1350508405051268

Espeland, W., & Lom, S. E. (2015). Noticing Numbers. How Quantification Changes What We See and What We Don't. In M. Kornberger, L. Justesen, A. Koed Madsen, & J. Mouritsen (Eds.), *Making things Valuable*. Oxford: Oxford University Press.

Espeland, W., & Sauder, M. (2007). Rankings and Reactivity: How Public Measures Recreate Social Worlds. *American Journal of Sociology*, *113*(1), 1–40.

Ewenstein, B., & Whyte, J. (2009). Knowledge practices in design: The role of visual representations as “epistemic objects.” doi:10.1177/0170840608083014

Ezzamel, M., & Hoskin, K. (2002). Retheorizing accounting, writing and money with evidence from Mesopotamia and ancient Egypt. *Critical Perspectives on Accounting*, *13*(3), 333–367. doi:10.1006/cpac.2001.0500

Ezzamel, M., Willmott, H., & Worthington, F. (2008). Manufacturing shareholder value: The role of accounting in organizational transformation. *Accounting, Organizations and Society*, *33*(2-3), 107–140. doi:10.1016/j.aos.2007.03.001

Fairhurst, G. T., & Cooren, F. (2009). Leadership as the Hybrid Production of Presence(s). *Leadership*, *5*(4), 469–490. doi:10.1177/1742715009343033

Farh, J. L., Zhong, C. B., & Organ, D. W. (2004). Organizational citizen- ship behavior in the People’s Republic of China. *Organization Science*, *15*, 241–253.

Fauré, B., Brummans, B. H. J. ., Giroux, H., & Taylor, J. R. (2010). The calculation of business, or the business of calculation? Accounting as organizing through everyday communication. *Human Relations*, *63*(8), 1249–1273. doi:10.1177/0018726709355658

Fauré, B., & Rouleau, L. (2011). The strategic competence of accountants and middle managers in budget making. *Accounting, Organizations and Society*, *36*(3), 167–182. doi:10.1016/j.aos.2011.04.001

Fisher, F. M. (2010). *The Application of the Controllability Principle and Managers’ Responses - A Role Theory Perspective*. Springer Fachmedien Wiesbaden.

Flamholtz, E. G., Das, T. K., & Tsui, A. S. (1985). Toward an integrative framework of organizational control. *Accounting, Organizations and Society*, *10*(1), 35–50.

Fontana, A., & Frey, J. H. (2005). The interview: From neutral stance to political involvment. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed., pp. 695–728). Thousand Oakes, CA: SAGE Publications Ltd.

Fraser, M. (2007). What Matters? Paper presented at the workshop Devices: The Happening Of The Social. In *What Matters?* London: Goldsmiths, University of London.

Free, C. (2007). Supply-Chain Accounting Practices in the UK Retail Sector: Enabling or Coercing Collaboration? *Contemporary Accounting Research*, *24*(3), 897–933. doi:10.1506/car.24.3.9

Gendron, Y., Cooper, D. J., & Townley, B. (2007). The construction of auditing expertise in measuring government performance. *Accounting, Organizations and Society*, *32*(1-2), 105–133. doi:10.1016/j.aos.2006.03.005

Gerdin, J., & Englund, H. (2011). Agency and structure in management accounting research: Reflections and extensions of Kilfoyle and Richardson. *Critical Perspectives on Accounting*, *22*(6), 581–592. doi:10.1016/j.cpa.2011.03.002

Gibbs, M., Merchant, K. A., & Vargus, M. E. (2004). Determinants and Effects of Subjective in Incentives. *The Accounting Review*, *79*(2), 409–436.

Groen, B. a. C., Wouters, M., & Wilderom, C. P. M. (2012). Why do employees take more initiatives to improve their performance after co-developing performance measures? A field study. *Management Accounting Research*, *23*(2), 120–141. doi:10.1016/j.mar.2012.01.001

Hansen, A., & Mouritsen, J. (1999). Managerial Technology and Netted Networks. "Competitiveness" in Action: The Work of Translating Performance in a High-tech Firm. *Organization*, *6*(3), 451–471. doi:10.1177/135050849963005

Hellström, T. (2004). Innovation as Social Action. *Organization*. doi:10.1177/1350508404046454

Hopwood, A. G. (1983). On Trying to Study Accounting in the Contexts in Which it Operates. *Accounting, Organizations and Society*, *8*(213), 287–305.

Hopwood, A. G. (1987). The Archaeology of Accounting Systems. *Accounting, Organizations and Society*, *12*(3), 207–234.

Hsieh, H., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277–1288.

Ittner, C. D., & Larcker, D. F. (2001). Assessing empirical research in managerial accounting: a value-based management perspective. *Journal of Accounting and Economics*, *32*(1), 349–410.

Jacobellis v. Ohio, N. 378 U.S. 184 (1964). U.S.A.: Supreme Court of the United States.

Jordan, S., & Messner, M. (2012). Accounting , Organizations and Society Enabling control and the problem of incomplete performance indicators. *Accounting, Organizations and Society*, *37*, 544–564.

Justesen, L. (2008). *Kunsten at skrive revisionsrapporter En beretning om forvaltningsrevisionens beretninger Kunsten at skrive revisionsrapporter*. *Business*.

Justesen, L., & Mouritsen, J. (2011). Emerald Article : Effects of actor-network theory in accounting research Effects of actor-network theory in accounting research. *Accounting, Auditing & Accountability Journal*, *24*(2), 161–193. doi:10.1108/09513571111100672

Järvinen, M., & Mik-Meyer, N. (2005). *Kvalitative metoder i et interaktionistisk perspektiv: interview, observationer og dokumenter*. Hans Reitzel.

Jørgensen, B., & Messner, M. (2010). Accounting and strategising: A case study from new product development. *Accounting, Organizations and Society*, *35*, 184–204. doi:10.1016/j.aos.2009.04.001

Kaplan, R. S., & Norton, D. P. (1996). Linking the Balanced Scorecard to Strategy. *California Management Review*, *39*(1), 53–79. Retrieved from http://esc-web.lib.cbs.dk/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=9707112887&site=ehost-live&scope=site

Kaptelinin, V., & Nardi, B. A. (2006). *Acting with Technology: Activity Theory and Interaction Design, MIT Press*. *MIT Press*. Cambridge, MA.

Kark, R., & Waismel-Manor, R. (2005). Organizational Citizenship Behavior: What's Gender Got To Do With It? *Organization*, *12*(6), 889–917. doi:10.1177/1350508405057478

Kastberg, G. (2014). Framing shared services: Accounting, control and overflows. *Critical Perspectives on Accounting*, *25*(8), 743–775.

Katz, D. (1964). The motivational basis of organizational behavior. *Behavioral Science*, *9*(2), 131–146. doi:10.1002/bs.3830090206

Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. New York: Wiley.

Keith, W., & Regh, W. (2008). Argumentation in science: The cross-fertilization of argumentation theory and science studies. In E. J. Hackett, O. Amsterdamska, M. Lynch, & J. Wajcman (Eds.), *The handbook of science and technology studies* (3rd ed., pp. 211–239). Cambridge, MA: MIT Press.

Kilfoyle, E., & Richardson, A. J. (2011). Agency and structure in budgeting: Thesis, antithesis and synthesis. *Critical Perspectives on Accounting*, *22*(2), 183–199. doi:http://dx.doi.org/10.1016/j.cpa.2010.06.013

Kreiner, K., & Mouritsen, J. (2005). The analytical interview Relevance beyond reflexivity. In *The Art of Science* (pp. 153–176). Liber/CBS Press.

Kuhn, T. (2008). A Communicative Theory of the Firm: Developing an Alternative Perspective on Intra-organizational Power and Stakeholder Relationships. *Organization Studies*, *29*, 1227–1254. doi:10.1177/0170840608094778

Kuhn, T. (2012). Negotiating the Micro-Macro Divide: Thought Leadership From Organizational Communication for Theorizing Organization. *Management Communication Quarterly*, *26*(4), 543–584. doi:10.1177/0893318912462004

Kvale, S. (1994). Ten standard objections to qualitative research interviews. *Journal of Phenomenological Psychology*, *25*(2), 147–173.

Latham, G. P., Sulsky, L. M., & MacDonald, H. (2008). *Performance Management*. Oxford: Oxford University Press.

Latour, B. (1987). *Science and Action*. Cambridge, UK: Harvard University Press.

Latour, B. (1988). *The Pasteurization of France*. London: Harvard University Press.

Latour, B. (1996). On Interobjectivity. *Symposium*, *3*(4), 228–245.

Latour, B. (1999). *Pandora's Hope: essays on the reality of science studies*. Harvard University Press.

Latour, B. (2000). When things strike back: a possible contribution of "science studies" to the social sciences. *British Journal of Sociology*, *50*(1), 107–123.

Latour, B. (2001). From "matters of facts" to "states of affairs". Which protocol for the new collective experiments? In *Lecture to the Darmstadt Colloquium, 30th March.*

Latour, B. (2005). *Reassembling the Social - An introduction to Actor-Network-Theory* (Vol. 7). Oxford: Oxford University Press. doi:10.1163/156913308X336453

Latour, B., & Woolgar, S. (1979). *Laboratory Life: The Construction of Scientific Facts*. Princeton: Sage Publications.

Law, J. (1992). Notes on the Theory of the Actor-Network : Ordering , Strategy , and Heterogeneity. *Systems Practice*, *5*(4), 379–393.

Law, J. (1994). *Organizing Modernity*. Oxford: Blackwell Publishing Ltd.

Law, J. (1996). Organising accountabilities. In *Accountability: Power, Ethos and the Technology of Managing* (1st editio., p. 256). Intl Thomson Business Press.

Law, J. (2004). *After Method: Mess in Social Science Research*. New York: Routledge.

Law, J. (2009). Actor Network Theory and Material Semiotics. In B. S. Turner (Ed.), *The New Blackwell Companion to Social Theory* (pp. 141–159). Chichester, UK: John Wiley and Sons.

Leclercq-Vandelannoitte, A. (2011). Organizations as Discursive Constructions: A Foucauldian Approach. *Organization Studies*, *32*(9), 1247–1271.

Leonard-Barton, D. (1995). *Wellsprings of knowledge*. Boston: Harvard Business School Press.

Leonardi, P. (2011). When flexible routines meet flexible technologies: Affordance, constraint, and the imbrication of human and material agencies. *MIS Quarterly*, *35*, 147–167.

Leonardi, P. (2012). Materiality, Sociomateriality, and Socio-Technical Systems: What Do These Terms Mean? How Are They Different? Do We Need Them? In P. M. Leonardi, B. A. Nardi, & J. Kallinikos (Eds.), *Materiality and Organizing: Social Interaction in a Technological World* (pp. 25–48). Oxford: Oxford University Press.

Lillis, A. M. (2002). Managing multiple dimensions of manufacturing performance — an exploratory study. *Accounting, Organizations and Society*, *27*(6), 497–529. doi:http://dx.doi.org/10.1016/S0361-3682(01)00032-0

Lohmann, L. (2009). Toward a different debate in environmental accounting: The cases of carbon and cost-benefit. *Accounting, Organizations and Society*, *34*(3/4), 499–534.

MacKenzie, S. B., Podsakoff, P. M., & Fetter, R. (1993). The impact of organizational citizenship behavior on evaluations of salesperson performance. *Journal of Marketing*, *57*, 70–80.

Malina, M. A., & Selto, F. H. (2004). Choice and change of measures in performance measurement models. *Management Accounting Research*, *15*(4), 441–469. Retrieved from 10.1016/j.mar.2004.08.002

Malmi, T., & Brown, D. A. (2008). Management control systems as a package — Opportunities , challenges and research directions. *Management Accounting Research*, *19*, 287–300. doi:10.1016/j.mar.2008.09.003

Marres, N. (2012). On Some Uses and Abuses of Topology in the Social Analysis of Technology (Or the Problem with Smart Meters). *Theory, Culture & Society*, *29*(4/5), 288–310.

McLean, C., & Hoskin, K. (1998). Organizing Madness: Reflections on the Forms of the Form. *Organization*, *5*(4), 519–541. doi:10.1177/135050849854005

McPhee, R. D., & Iverson, J. O. (2013). Activity Coordination and the Montreal School. In D. Robichaud & F. Cooren (Eds.), *Organization and Organizing: Materiality, Agency and Discourse* (pp. 109–133). New York: Routledge.

McPhee, R. D., & Zaug, P. (2009). The communicative constitution of organizations: A framework for explaination. In L. L. Putnam & A. M. Nicotera (Eds.), *Building Theories of organization: The constitutive role of communication* (pp. 21–48). New York: Routledge.

Merchant, K. A. (1987). How and why firms disregard the controllability principle. In W. J. Bruns & R. S. Kaplan (Eds.), *Accounting and management: Field study perspectives* (pp. 316–338). Boston: Harvard Business School Press.

Merchant, K. A., & Van der Stede, W. A. (2012). *Management control systems: performance measurement evaluation and incentives* (Third.). London: Prentice Hall.

Miller, P. (2001). Governing by Numbers: Why Calculative Practices Matter. *Social Research*, *68*(2), 379–396.

Miller, P., & O'Leary, T. (1987). Accounting and the construction of the governable person. *Accounting, Organizations and Society*, *12*(3), 235–265.

Mouritsen, J. (2011). The operation of representation in accounting: A small addition to Dr. Macintosh's theory of accounting truths. *Critical Perspectives on Accounting*, *22*(2), 228–235. doi:http://dx.doi.org/10.1016/j.cpa.2010.06.015

Mouritsen, J., Hansen, A., & Hansen, C. Ø. (2009). Short and long translations : Management accounting calculations and innovation management. *Accounting, Organizations and Society*, *34*, 738–754. doi:10.1016/j.aos.2009.01.006

Mumby, D. K. (2011). What's cooking in organizational discourse studies? A response to Alvesson and Karreman. *Human Relations*, *64*, 1147–1161.

Mundy, J. (2010). Creating dynamic tensions through a balanced use of management control systems. *Accounting, Organizations and Society*, *35*(5), 499–523. doi:10.1016/j.aos.2009.10.005

Nicolini, D., Mengis, J., & Swan, J. (2012). Understanding the role of objects in cross-disciplinary collaboration, (March 2015). doi:10.1287/orsc.1110.0664

Nicollini, D. (2009). Zooming in and out: Studying practices by switching theoretical lenses and trailing connections. *Organization Studies*, *33*, 1391–1418.

O'Shea, A. (2002). The (R)evolution of New Product Innovation. *Organization*, *9*(1), 113–125. doi:0803973233

Organ, D. W. (1988). *Organizational Citizenship Behavior: The Good Soldier Syndrome*. Lexington, MA: DC Heath.

Organ, D. W. (1997). Organizational Citizenship Behavior: It's Construct Clean-Up Time. *Human Performance*, *10*(2), 85–97. doi:10.1207/s15327043hup1002

Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2006). *Organizational Citizenship Behavior: Its Nature, Antecedents, and Consequences*. Thousand Oakes, CA: SAGE Publications Ltd.

Ouchi, W. G. (1980). Markets, Bureaucracies, and Clans. *Administrative Science Quarterly*, *25*(March), 129–141.

Parker, L. D. (2012). Qualitative management accounting research : Assessing deliverables and relevance. *Critical Perspectives on Accounting*, *23*(1), 54–70. doi:10.1016/j.cpa.2011.06.002

Paulson Ltd. (2010). *PowerPoint material on behavioural targets*. *Material developed for BioTech* (Vol. N/A).

Pickering, A. (1986). Against Correspondence: A Constructivist View of Experiment and the Real. In *PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association* (pp. 196–206). Chicago: The University of Chicago Press.

Pickering, A. (1995). *The mangle of practice: Time, agency and science*. Chicago: University of Chicago Press.

Pinch, T. J., & Bijker, W. E. (1984). The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other. *Social Studies of Science*, *14*(3), 399–441.

Podsakoff, N. P., Whiting, S. W., Podsakoff, P. M., & Blume, B. D. (2009). Individual- and organizational-level consequences of organizational citizenship behaviors: A meta-analysis. *The Journal of Applied Psychology*, *94*(1), 122–141. doi:10.1037/a0013079

Podsakoff, P. M., & MacKenzie, S. B. (1997). Impact of organizational citizenship behavior on organizational performance: A review and suggestions for future research. *Human Performance*, *10*, 133–151.

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: a critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, *26*(3), 513–563.

Power, M. (1999). *The Audit Society: Rituals of Verification*. Oxford: Oxford University Press.

Power, M. (2004). Counting, Control and Calculation: Reflections on Measuring and Management. *Human Relations*, *57*(6), 765–783. doi:10.1177/0018726704044955

Preston, A. M., Cooper, D. J., & Coombs, R. W. (1992). Fabricating Budgets: A Study of the Production of Management Budgeting in the National Health Service. *Accounting, Organizations and Society*, *17*(6), 561–593.

Putnam, L. L. (n.d.). Unpacking the Dialectic: Alternative Views on the Discourse-Materiality Relationship. *Journal of Management Studies*.

Putnam, L. L., & Fairhurst, G. T. (2001). Discourse analysis in organizations. The new handbook of organizational communication: Advances in theory, research and methods. In *The new handbook of organizational communication: Advances in theory, research, and methods* (pp. 78–136). Thousand Oakes, CA: SAGE Publications Ltd.

Qu, S. Q., & Cooper, D. J. (2011). The role of inscriptions in producing a balanced scorecard. *Accounting, Organizations and Society*, *36*(6), 344–362. doi:10.1016/j.aos.2011.06.002

Quattrone, P. (2004). Commenting on a commentary? Making methodological choices in accounting. *Critical Perspectives on Accounting*, *15*, 232–247. doi:10.1016/S1045-2354(03)00066-2

Quattrone, P. (2009a). Books to be practiced: Memory, the power of the visual, and the success of accounting. *Accounting, Organizations and Society*, *34*(1), 85–118. doi:10.1016/j.aos.2008.03.001

Quattrone, P. (2009b). We have never been Post-modern: On the Search of Management Accounting Theory. *European Accounting Review*, *18*(3), 621–630. doi:10.1080/09638180902863837

Quattrone, P., & Hopper, T. (2005). A time – space odyssey: management control systems in two multinational organisations. *Accounting, Organizations and Society*, *30*, 735–764. doi:10.1016/j.aos.2003.10.006

Rennstam, J. (2012). Object-control: A study of technologically dense knowledge work. *Organization Studies*, *33*(10), 1071–1090.

Revellino, S., & Mouritsen, J. (2009). The Multiplicity of Controls and the Making of Innovation. *European Accounting Review*, *18*(2), 341–369. doi:10.1080/09638180802681529

Revellino, S., & Mouritsen, J. (2013). European Accounting Conference. In *The Performativity Of Accounting: How Calculative Practices Deploy Pervasive Effects On Innovative Spaces* (pp. 1–31). Copenhagen: EAA: Dauphine University Paris.

Rheinberger, H. J. (1997). *Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube*. Palo Alto, CA: Stanford University Press,.

Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a General Theory of Planning. *Policy Sciences*, *4*, 155–169.

Roberts, J., & Jones, M. (2009). Accounting for self interest in the credit crisis. *Accounting, Organizations and Society*, *34*(6-7), 856–867.

Robson, K. (1992). Accounting numbers as "inscription": Action at a distance and the development of accounting. *Accounting, Organizations and Society*, *17*(7), 685–708.

Robson, K. (1999). Social analyses of accounting institutions: Economic value, accounting representation and the conceptual framework. *Critical Perspectives on Accounting*, *10*(5), 615–629. doi:http://dx.doi.org/10.1006/cpac.1999.0347

Sandelin, M. (2008). Operation of management control practices as a package—A case study on control system variety in a growth firm context. *Management Accounting Research*, *19*(4), 324–343.

Scarbrough, H., Panourgias, N. S., & Nandhakumar, J. (2015). Developing a Relational View of the Organizing Role of Objects : A study of the innovation process in computer games. *Organization Studies*, *36*(2), 197–220. doi:10.1177/0170840614557213

Schoeneborn, D. (2011). Organization as Communication: A Luhmannian Perspective. *Management Communication Quarterly*, *25*(4), 663–689. doi:10.1177/0893318911405622

Schoeneborn, D. (2013). The Pervasive Power of PowerPoint: How a Genre of Professional Communication Permeates Organizational Communication. *Organization Studies*, *34*(12), 1777–1801. doi:10.1177/0170840613485843

Selto, F. H., Renner, C. J., & Young, S. M. (1995). Assessing the organizational fit of a just-in-time manufacturing system: testing selection, interaction and systems models of contingency theory. *Accounting, Organizations and Society*, *20*(7), 665–684.

Simons, R. (1995). *Levers of control: How Managers Use Innovative Control Systems to Drive Strategic Renewal*. Boston: Harvard Business School Press.

Skærbæk, P., & Tryggestad, K. (2010). The role of accounting devices in performing corporate strategy. *Accounting, Organizations and Society*, *35*(1), 108–124.

Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, *68*, 653–663.

Star, S. L. (1999). The ethnography of infrastructure. *American Behavioural Science*, *43*(3), 377–391.

Steward, F., & Conway, S. (1998). Situating Discourse in Environmental Innovation Networks. *Organization*, *5*(4), 479–502. doi:0803973233

Sturdy, A., Clark, T., Fincham, R., & Handley, K. (2009). Between innovation and legitimation-boundaries and knowledge flow in management consultancy, *16*(5), 627–653. doi:10.1177/1350508409338435

Swales, J. (1998). *Other floors, other voices: A textography of a small university building.* Mahwah, NJ: Erlbaum.

Swan, J., Bresnen, M., Newell, S., & Robertson, M. (2007). The object of knowledge: The role of objects in biomedical innovation, *60*(12), 1809–1837. doi:10.1177/0018726707084915

Taylor, J. R. (1999). The Other Side of Rationality: Socially Distributed Cognition. *Management Communication Quarterly*, *13*, 317–326. doi:10.1177/0893318999132008

Taylor, J. R. (2011a). Organization as an (Imbricated) Configuring of Transactions. *Organization Studies*, *32*(9), 1273–1294. doi:10.1177/0170840611411396

Taylor, J. R. (2011b). Organization as an (Imbricated) Configuring of Transactions. *Organization Studies*, *32*(9), 1273–1294. doi:10.1177/0170840611411396

Taylor, J. R., & Robichaud, D. (2004). Finding the Organization in the Communication : Discourse as Action and Sensemaking. *Organization*, *11*(3), 395–413. doi:10.1177/1350508404041999

Ter Bogt, H. J., & Scapens, R. W. (2012). Performance Management in Universities: Effects of the Transition to More Quantitative Measurement Systems. *European Accounting Review*, (March 2014), 1–47. doi:10.1080/09638180.2012.668323

Tessier, S., & Otley, D. (2012). From management controls to the management of controls. *Accounting, Auditing & Accountability Journal*, *25*(5), 776–805. doi:10.1108/09513571211234259

Tidd, J., Bessant, J., & Pavitt, K. (1997). *Managing innovation: Integrating technological, market and organisational change*. Chichester: John Wiley and Sons.

Tushman, M., Smith, W. K., Chapman, R., Westerman, G., & Reilly, C. O. (2010). Organizational designs and innovation streams. *Industrial and Corporate Change*, *19*(5), 1331–1366. doi:10.1093/icc/dtq040

Van Dyne, L., Cummings, L. L., & Parks, J. M. (1995). Extra role behaviours: In pursuit of construct and definitional clarity (a bridge over muddied waters). In L. L. Cummings & B. M. Staw (Eds.), *Research in Organizational behaviour* (pp. 215–285). Greenwich, CT: JAI.

Van Dyne, L., Graham, J. W., & Dienesch, R. M. (1994). Organizational citizenship behavior: Construct redefinition, measurement, and validation. *Academy of Management Journal*, *37*, 765–802.

Werner, J. M. (1994). Dimensions that make a difference: Examining the impact of in-role and extra-role behaviors on supervisory ratings. *Journal of Applied Psychology*, *79*, 98–107.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviour. *Journal of Management*, *17*, 601–617.

Wouters, M., & Rojimans, D. (2011). Using prototypes to induce experimentation and knowledge integration in the development of enabling accounting information. *Contemporary Accounting Research*, *28*(2), 708–736.

Wouters, M., & Wilderom, C. (2008). Developing performance-measurement systems as enabling formalization: A longitudinal field study of a logistics department. *Accounting, Organizations and Society*, *33*(4-5), 488–516. doi:10.1016/j.aos.2007.05.002

Åsberg, R., Hummerdal, D., & Dekker, S. (2011). There are no qualitative methods–nor quantitative for that matter: the misleading rhetoric of the qualitative–quantitative argument. *Theoretical Issues in Ergonomics Science*, *12*(5), 408–415.

Appendixes

Appendix One: Interview guide for pilot interviews

Research Question: *How are the PP and IDP performance management tools influencing individual researchers' ability to innovate in BioTech's research functions?*	
Introduction	Introduce aim of research How many years have you been in BioTech? How many of those years have been in this department?
Guiding questions	**Interview question**
H1: What are the inhibitors and accelerators to idea generation and early-stage innovation as perceived by researchers?	**<u>Innovation</u>** What is innovation from your perspective? Could you provide an example? **Getting ideas** Imagine the perfect work conditions for being innovative and getting new ideas – how would you describe this place? Is there a formalized process for initiating new ideas? What are the most important factors for getting new ideas? (Could be various types of factors: e.g. time, culture, personal, manager, apparatus, etc.)? Try and think back to an example where you came up with a new idea at work. What was your next step? **Developing ideas** What is important for the ability to bringing ideas into action? How long is the typical duration of an innovation project?
H3: How do collaboration (intra-departmental, inter-departmental, across SVP areas and conferences) affect innovative behavior?	**<u>Knowledge Sharing</u>** **Collaboration** What are the typical ways in which you collaborate with other researchers? Have examples ready (lunch, etc) Do your colleagues affect your innovation abilities, and if yes, how?

	A survey on BIOTECH R&D indicated that 67% find that ideas typically arise collectively. What do you think about this? How does collaboration within your department affect your idea generation? How does collaboration between departments – and between SVP areas affect innovation processes? How does attending conferences and other 3rd party events affect your ability to innovate?
	Manager/employee relationship Does your manager affect your creative work processes in any ways? If yes, how? Which managerial qualities are of greatest importance for your innovation abilities?
H4: How are BioTech performance management tools affecting research activities? H5: What are the shortcomings of BioTech researchers PPs compared to the stated purpose of performance management; are PPs currently considered a driver of research productivity by research staff?	**Performance Management** Can you identify any barriers or enablers for innovation within the current performance management system? From an innovation perspective, how do you experience the target setting process in PP? In your opinion, how does PP affect your abilities for coming up with new ideas or seeking new ways? Does PP enable or limit new ideas to thrive? Does PP encourage you to take risks in pursuing new ideas? Does PP enable or limit your possibilities for keeping track on workflows? From an innovation perspective, how do you experience the IDP process to affect your abilities for coming up with new ideas or seeking new ways?

	What do you think could be improved in the performance management process?
H6: Would the introduction of behavioural targets aid in closing the gap between the current PP system and how performance management should ideally work in a research environment?	**Performance Management – Behavioural targets** Have your department introduced behavioural targets in the PP process? If: yes: How does behavioural targets affect you (please exemplify)? Can you identify any enablers to innovation or barriers to innovation that are linked to behavioural targets? Do you have any other ideas for how BioTech could improve the current performance target setting practices?
Interview end	Would it be okay to contact you for follow up questions if necessary?
Innovation H1: What are the inhibitors and accelerators to idea generation and early-stage innovation as perceived by researchers? H2: Are the inhibitors and accelerators to innovation identified in H1 different from researchers involved in radical and incremental research? **Knowledge sharing** H3: How do collaboration (intra-departmental, inter-departmental, across SVP areas and conferences) affect iBioTechovative behavior? **Performance management** H4: The performance management tools currently used in BioTech are more capable of setting effective targets for easier 'measurable' departments such as sales (e.g. number of units sold by x date) and even Development (e.g. number of subjects enrolled in study by	

x date) than for research activities. How are BioTech performance management tools affecting research activities? H5: What are the shortcomings of BioTech researchers PPs compared to the stated purpose of performance management; are PPs currently considered a driver of research productivity by research staff? H6: Would the introduction of behavioural targets aid in closing the gap between the current PP system and how performance management should ideally work in a research environment?	

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Co-author statement

Title of paper	Organizing innovation in a pharmaceutical company: Conversations between control objects and work objects
Journal	Submitted to *Organization*
Published	In review

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Title of paper	Accounting for organizational citizenship behaviour: attempts to formalize the informal in a global pharmaceutical company
Journal	Not yet submitted to a journal. We plan to soon submit the paper to *Accounting, Organizations, and Society*
Published	Not published or submitted

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