BALANCING INNOVATIONS: BRIDGING ORGANIZATIONAL AND INSTITUTIONAL OPERATIONS VIA PROTO-INSTITUTIONS

Explicating the Multi-Level-Perspective of Dynamic Capability Research

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INTRODUCTION

The nature and management of innovations have long attracted the attention of management scholars. Since innovations are seen as an engine for competitive advantage and economic success (Schumpeter 1983), it is not surprising that an abundance of research on innovations pervades organization and management journals. In studying existing research on innovations in the context of an empirical research project on disruptive innovations, the question arises of how innovators intend to manage the challenge of balancing internal and external development processes under high uncertainty. In undertaking such study, we saw that various theoretical lenses have been applied in innovation research, and consequently, divergent discussions on innovations in different layers of analysis have emerged. However, despite the variety of work, we have identified an increasing consensus (1) to understand innovations as process phenomena that (2) have to be studied via interdependent levels of analysis (Volberda et al. 2014; van Dijk et al. 2011; Gawer, Phillips 2010). Furthermore, a clear understanding of the link between firm-internal and external challenges in innovation processes is still missing. In fact, two isolated streams of research on innovations can be distinguished based on their analytical focus. On the one hand is work that stresses firm-internal, organizational challenges (e.g. adequate readiness for action, specific investments, learning); on the other is work focusing on firm-external, market-based challenges in innovation processes (e.g. competition, timing strategies, market development and/or institutional challenges). For instance, in its focus on the organizational level of analysis, the prominent Dynamic Capability Approach highlights the need for constant organizational adaptation to firm-external dynamics. Stressing constant renewal, work in this vein has increasingly centered on the nature of "dynamic capabilities" (Teece et al. 1997) and, in particular, on how organizations develop and employ organizational readiness for action in response to environmental changes. In the opposite direction, highlighting firm-external challenges that actors face in innovation processes, a developing stream of research focuses on the more aggregate level of the institutional setting. For instance, not less popular than the Dynamic Capability Approach, institutional theory explores the impact of institutional arrangements on innovation processes and *"the purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions"* (Lawrence & Suddaby, 2006, p. 215).

Similar to Volberda and colleagues (*"…the field of innovation research is fragmented, with theory being developed for different types of management innovation, for different levels of analysis, or for different stages of the management innovation process…"* (Volberda et al.

2014, p. 1246)), we have to conclude that current research paints a rather sobering picture of work applying a multi-level and process-view perspective on innovations. A clear understanding of the link between firm-internal and -external challenges in innovation processes is still lacking. More specifically, the elaboration of a consistent theoretical grounding that allows a nuanced analysis of innovation as a complex process and multi-level phenomenon has only been sparsely addressed.

Against this fundamental gap in research, this paper introduces proto-institutional work as a promising concept that could elaborate on a link of micro and macro levels of analysis. Proto-institutions are *"institutions in the making"* or *"[new] practices, technologies, and rules that are narrowly diffused and only weakly entrenched, but that have the potential to become widely institutionalized (…)"* (Lawrence et al. 2002, p. 283). Although, the concept of proto-institutions (Lawrence et al. 2002) is still in its infancy, researchers agree that it provides a conceptual lens that helps us to study the processes by which actors draw on and potentially impact their institutional context (Schüßler et al. 2014). We suggest further exploration concerning the role of proto-institutional work with a consistent, theoretical, multi-level grounding, which allows for studying both institutional and organizational aspects. Building on the Competence-based Theory of the Firm (Freiling et al. 2008), we analyze innovation processes on a consistent theoretical grounding and from a particular, co-evolutionary point of view. We show that innovation processes, indeed, encompass a combination of aspects on the micro level (firm), the meso level (cooperation, networks) and the macro level (market/industry). Taken together, our empirical data suggest conceptualizing proto-institutional work as dynamic capability: While actors engage in the creation and scalability of a new institutional rule, they are able to a) shape field-level practices ("Symbolic Legitimacy Management") and b) simultaneously manage the ex-ante fit internally by preparing corresponding resources and competences in order to address assumed windows of opportunities ("Technical-Material Adaptation Management").

Given the relative paucity of extant research on this matter, we explore our initial research question within a larger empirical research project on disruptive innovations in order to generate a profound understanding of how actors manage the balance of micro-organizational and macro-institutional operations via the development of a proto-institution. As a whole, we provide a threefold contribution. First, we highlight the importance of co-evolutionary, multi-level research in the context of innovation. Second, we further elaborate on the construct of proto-institutions in terms of their impact not only on firm-external, but on internal aspects as

well. Third, we provide deep insights into the multilevel complexities of the management of innovations in highly regulated fields.

This paper is organized as follows. In the next section, we provide a short overview of recent research highlighting dynamic competence development on the organizational level of analysis as well as research that focuses on the institutional setting, elaborating on firm-external challenges in innovation processes. Moreover, we reveal the concept of proto-institutional work as a promising link between organizational and institutional developments. We then introduce the Competence-based Theory of the Firm as a theoretical framework to study multi-level processes in innovation research. In the following section, we discuss an embedded single case study conducted in the German healthcare sector to understand the management of the interdependence of organizational and institutional developments in innovation processes. In this context we show how organizations manage the interplay of organizational and institutional operations in disruptive innovation processes. Finally, we discuss our own findings in light of other empirical and theoretical findings and introduce our multi-level model. We show that proto-institutions take center stage in the management of the balance of institutional and organizational development processes from a single actor perspective. Taken together, we formulate a contribution to dynamic capability research by providing a model that allows for combined analysis of multi-level processes based on the consistent theoretical framework of the CbTF and by presenting proto-institutions as instruments to deal with environmental uncertainty and resistance to change.

THEORETICAL BACKGROUND

Firm-internal challenges in innovation processes from a dynamic capability view

Building on the concept of routines (Nelson & Winter 1982) and on resource- and competence-based reasoning, the Dynamic Capability Approach has emerged as a popular concept in innovation research. Focusing on the organizational level of analysis, the Dynamic Capability Approach elaborates on internal challenges that organizations face in change and innovation processes. Opposing the static and ex-post view of traditional resource- and competence-based thinking (Foss & Ishikawa 2007; Freiling et al. 2008, Priem & Butler 2001a, 2001b), the Dynamic Capability Approach assumes that organizations constantly need *"(…) to renew competences so as to achieve congruence with the changing business environment"* (Teece et al. 1997, p. 515; Ambrosini & Bowman 2009; Eisenhardt & Martin 2000). Hence, in applying

a dynamic view, the Dynamic Capability Approach provides a useful concept to depict firm-internal performance conditions that allow for organizations to be innovative in dynamic environments (Danneels 2002, 2011; Verona & Ravasi 2003). The approach focuses on dynamic capabilities, or the *"capacity of an organization to purposefully create, extend or modify its resource base"* (Helfat et al. 2007, p. 4). Empirical research also stresses the role of dynamic capabilities, for instance in innovation (Danneels 2002; Verona & Ravasi 2003), restructuring (Karim & Mitchell 2000), and corporate venturing processes (Collinson & Wilson 2006; Keil 2004). However, evidence that the development of such capabilities is not always a smooth, uncomplicated process illustrates that organizations may also face difficulties in adapting to changing environmental demands (Collinson & Wilson 2006; Danneels 2011; Sull 1999; Tripsas & Gavetti 2000).

Though dynamic capabilities constitute one of the most popular research interests in the context of innovation, the concept has been criticized for its various shortcomings: The most fundamental critic refers to the fuzzy theoretical conceptualization of the dynamic capability construct (Arend & Bromiley 2009; Vogel & Güttel 2012). While the microfoundation of dynamic capabilities in terms of sensing, seizing and reconfiguring capabilities (Teece 2007, 2012) can be seen as a valuable contribution, operationalization problems (Ambrosini & Bowman 2009; Zahra et al. 2006) lead to critical questions regarding the practical contribution of dynamic capability research (Arend & Bromiley 2009). Moreover, the impact of the environment on organizational processes, as well as the embeddedness of the organization in its environment, needs further explication. Since the Dynamic Capability Approach depicts performance exclusively as the result of purposeful organizational change processes depending on environmental dynamics, entrepreneurial endeavors and activities undertaken to deal with firm-external influences and innovation barricades remain rather unspecified. Hence, the main focus on the organizational level of analysis leads not only to the negligence of interrelated phenomena on the macro-level, but to the assumption that organizations would lack influence on firm-external aspects, as well.

Despite the centrality of environmental dynamics in dynamic capability research, little has been done to study the link of environmental ("macro") and organizational ("micro") levels of analysis. While research focuses on organizational adaptation, agency and the possible impact of entrepreneurs on external dynamics have only been sparsely addressed. Given these shortcomings, we note that there is insufficient knowledge regarding the purposeful management of the interplay of institutional and organizational developments over time. Since we know

that organizations have to develop readiness for action that fits the firm-external (e.g. institutional) setting, we argue that there is a need to explore how market-shaping processes may help to generate this future compatibility. Assuming that purposeful entrepreneurial market-shaping activities may be an important aspect of organizational innovativeness, this study stresses that multi-level processes are essential to understand all facets of dynamic capabilities and capability development. With the objective to study the role of the recursive management of organizational and environmental developments for dynamic capability research, this study introduces insights from macro-oriented approaches to conceptualize the recursive impact of organizations and environmental demands. Specifically, this study uses the institutional work concept, which is rooted in institutional theory.

Firm-external challenges in innovation processes from an institutional point of view

Focusing on macro-level phenomena to explain organizational behavior, research in the realm of institutional theory elaborates on firm-external challenges that actors face in innovation processes. Institutional theorists conceptualize such environmental aspects with the help of institutions. Institutions are understood as *"shared rules and typifications that identify categories of social actors and their appropriate relationships"* (Barley & Tolbert 1997). Research in this realm is based on the assumption that actors have to adapt their innovations to field-level institutional arrangements in order to gain legitimacy and acceptance. In opposition to resource- and competence-based thinking, then, competitive advantages are depicted as the result not only of rational efficiency, but also of conformity with the institutional environment. It is argued that the institutional environment conveys *"a common external standard of what a community defines reasonable behavior"* (van de Ven & Lifschitz 2013, p. 164). Organizations that conform to these institutionalized rules gain legitimacy and, therefore, access to superior resources and competences. Against this background, institutional theorists stress that institutional arrangements shape the trajectories of organizational actions (DiMaggio & Powell 1983; Jepperson 1991; Scott 2008). For instance, empirical studies show that institutional arrangements may affect the attention of actors (Ocasio 1997), determine appropriate behavior (Lounsbury 2007), and influence the choice of alliance partners (Vasudeva et al. 2013) and access to (D'Aunno et al. 1991) as well as the selection process of adequate resources and competences (Oliver 1997).

Traditionally, institutional thinking has highlighted non-reflexive behavior and taken for granted conformity with regard to institutional arrangements. Meanwhile, strategic and managerial actions have increasingly attracted the attention of researchers. With the emergence of the institutional work approach, focus has shifted from rather passive organizational behavior to *"the purposive action of individuals and organizations aimed at creating, maintaining, and disrupting institutions"* (Lawrence & Suddaby 2006, p. 215). Since institutions may promote (Kennedy & Fiss 2009) or inhibit (Ferlie et al. 2005) innovations – depending on their conformity with field-level structures (Caronna 2004) – the institutional work concept acknowledges that actors may sometimes also engage in institutional work in order to change those firm-external requirements to which they have to adapt to remain innovative. An abundance of research has elaborated on the activities that actors perform in terms of changing their institutional environment. For instance, Slager et al. (2012) theorize standardization as institutional work, stressing the constituting activities of "calculative framing," "engaging," and "valorizing"; Taupin (2013) and Jagd (2011) examine "justification work" as a possibility for supporting institutional projects with the help of moral argumentation; and Zietsma and Lawrence (2010) highlight the importance of "practice work" and "boundary work" for field-level change.

While institutional work thus somewhat addresses the outcome of activities that actors perform in endogenous institutional change processes, another concept emerged in 2002 that shifted the focus on the initial development stages of institutional arrangements (Lawrence et al. 2002). Referred to as a "proto-institution," this concept is what researchers know as *"institutions in the making"* or *"[new] practices, technologies, and rules that are narrowly diffused and only weakly entrenched, but that have the potential to become widely institutionalized (...)"* (Lawrence et al. 2002, p. 283). A part of this concept is the idea that disruptive environments, characterized by institutional voids (Mair et al. 2012), trigger entrepreneurs to engage in proto-institutional development processes in order to create an institutional setting that supports their innovation projects (Puffer et al. 2010; Zietsma & McKnight 2009; Schüßler et al. 2014). Zietsma and McKnight (2009) characterize proto-institutional work as collaborative co-creation and competitive convergence, and Helfen and Sydow (2013) show that proto-institutions may be an outcome of negotiation processes. In the development process of proto-institutions, actors negotiate the regulatory content of the prospective rule with relevant stakeholders to gain their legitimacy and initiate its institutionalization process aiming at changing field-wide practices, rules and norms (Helfen & Sydow 2013; Zietsma &

McKnight 2009). With the emergence of "proto-institutions," institutional theory provides a lens that helps us to study the processes actors draw on in order to develop new institutions that support their innovation projects. However, since research on proto-institutions is still in its infancy, we have only limited knowledge regarding the nature and impact of proto-institutions and proto-institutional work in the context of innovation. This is astonishing: On the one hand, institutional theory has been heavily criticized on its narrow focus on institutional changes, thereby neglecting *"[to] reconnect institutional research with processes that occur inside the organization"* (Suddaby et al. 2007, p. 468). On the other hand, with proto-institutions, institutional theory seems to provide a promising construct for exploring how actors use the emergence of proto-institutions for the preparation of their organizational readiness for action in terms of realizing the intended innovation project.

Since institutional theory remains silent with regard to the explanation of firm-internal processes that result from purposeful institutional change (Schimank 2010, DiMaggio 1988), we highlight the need to apply a framework with a consistent theoretical grounding that allows us to study the link of macro and micro levels of analysis and, specifically, to understand the impact of institutional work on organizational processes et vice verda.

The sum of our research paints a sobering picture of work that intends to integrate firm-internal and external perspectives in innovation research. Despite the impressive amount of research that has extended dynamic capability and institutional research, a clear understanding of the link between firm-internal and -external challenges in innovation processes is still missing. Though we have identified proto-institutions as a promising construct to understand the management of organizational and institutional dynamics in innovation processes, we have to conclude that neither institutional nor competence-based approaches provide a consistent theoretical grounding allowing us to study the link of micro and macro levels. Against this background, we introduce the Competence-based Theory of the Firm (short: CbTF; Freiling et al. 2008), which, in 2008, was presented in *Organization Studies* as consistent theoretical framework for multi-level and process analysis. The CbTF seems to be a promising theoretical grounding for realizing a compatible integration of competence-based and institutional thinking as well as a nuanced analysis of innovations as a complex, process-oriented and multi-level phenomena.

The CbTF as theoretical framework to study multi-level processes in innovation research

The *Competence-based Theory of the Firm* (short: CbTF; Freiling et al. 2008) is a relatively nascent theory that extends the line of thinking on resource- and competence-based approaches. Advancements to traditional resource- and competence-based frameworks can be seen in the explicit definition of resources, competences and assets, as well as in the conceptualization of entrepreneurial activities (Freiling & Lütke Schelhowe 2014). While early competence- and resource-based thinking conveys the subliminal impression that competence management might be guided by the invisible hand of the manager (Freiling & Lütke Schelhowe 2014), the CbTF explicates managerial activities in the context of innovation processes. Most importantly, as part of the market process theory, the CbTF provides a clear theoretical framing that acknowledges the importance of process-based concepts in explaining innovations in a dynamic environment and in the analysis of multi-level phenomena (Freiling et al. 2008). Specifically, the traditional ex-post-oriented explanandum of resource- and competence-based thinking is modified in the "*explanation of current and future firm competitiveness (…)*" (Freiling et al. 2008, p. 1150), shifting the focus from "*(sustainable) competitive advantage*" to "*striving for competitiveness*" (Freiling et al. 2008, p. 1151). By linking micro, meso, and macro levels of analysis, the CbTF provides a clear theoretical framing that underscores the interplay and recursive impact of structure and agency in innovation processes.

However, as a relatively nascent theory and as an advancement of traditional resource- and competence-based approaches, the nucleus of the CbTF has focused on the explanation of micro-level dynamics. Based upon the clear theoretical foundation in terms of six hard core elements, we integrated a compatible conceptualization of institutions in the theoretical framework of the CbTF in order to concretize external structural framings. In line with the philosophy of science of the CbTF, we applied a recursive ontology of institutions, supposing that while institutions sometime constrain as well as convey action at the same time, they are the product of human activities and collective learning processes (Barley and Tolbert 1997; Cloutier and Langley 2014), and therefore embody the diverse strategic interests and worldviews of more or less powerful actors (Zietsma and McKnight 2009). In our adaptation of the reflexive understanding of Hargrave and Van de Ven (2006, p. 866), institutions are understood as "*(…) the humanly devised schemas, norms, and regulations that provide orientation and guidance for actors in social life.*" Based on this theoretical grounding, the CbTF provides a framework which extends the exclusive focus on the external impact of institutions and proto-institutions on field-level practices by exploring the internal dynamics during proto-institution development processes. Against this background, we conducted an empirical study

that is informed by the theoretical assumption that proto-institutions may constitute a promising instrument to manage the interaction and co-evolution of institutional and organizational developments.

RESEARCH QUESTION, METHODS AND EMPIRICAL CONTEXT

Given the relative paucity of insights on the link between micro- and macro-level challenges in innovation processes, our paper addresses the following research question: "How do innovators manage the interplay of firm-external and -internal operations in order to secure competitiveness while facing high uncertainty during (disruptive) innovation processes?"

Pursuing the objective of theory extension (Eisenhardt 1989; Yin 2014), we chose an explorative, iterative empirical research design in order to explore the link of institutional and organizational levels of analysis in innovation research (Tracey & Phillips 2011). Hence, in line with Yin (2014), the management of the co-evolution of institutional and organizational phenomena in innovation processes is explored within an embedded single case study.

Empirical Context

The empirical single case study was conducted in the German healthcare sector between 2005 and 2015. The German healthcare sector appeared to be highly promising for empirical exploration of our theoretical research interests for several reasons. First, the German healthcare sector can be characterized as a highly regulated sector with standardized rules and practices. Due to legal regulations, political interests, and common practices, innovation activities often face institutional barriers that inhibit their implementation. For instance, suspected demographic developments and a lack of medical and non-medical staff require fundamental changes in healthcare practices and structures; however, the introduction of innovative healthcare concepts is impeded by stable institutional arrangements. Second, the case study was conducted in the sub-market of outpatient ventilator care. The existence of such sub-markets demands the specification of general healthcare regulations for each sub-segment in more detail. However, empirical data show that such individualized regulations are absent in the sub-segment of outpatient ventilator care. Thus, since the general regulations of the healthcare sector shape the practices of outpatient ventilator care only superficially, this field lacks guidelines that take into account the special requirements of outpatient ventilated pa-

tients. Referring to Mair and colleagues (Mair & Marti 2009; Mair et al. 2012), this market can be characterized by institutional voids – that is, situations where *"institutional arrangements that support markets are absent, weak, or fail to accomplish the role expected of them."* Existing research shows that in highly-regulated and disrupted fields (Aldrich & Fiol 1994; Zietsma & McKnight 2009), as well as in markets characterized by institutional voids (Mair & Marti 2009; Mair et al. 2012), market-shaping activities become vitally important in innovation processes. Since innovative practices need the support of the institutional setting for their legitimation, actors may first have to create new or modify existing institutional arrangements to fit with their innovative projects. Due to demographic challenges, such profound changes of common practices and structures in the German healthcare sector have become essential and politically desired. Against this background, we argue that the German healthcare sector in general and the sub-market outpatient ventilator care in particular seem highly promising places to observe innovative actors intending to take advantage of the rare opportunity of institutional change and trying to manage the interplay of external and internal developments with an attempt to generate an institutional setting that fits their innovative project.

Empirical Case Study

The empirical case study focuses on the industrial firm *Breathe,* which specializes in the care of long-term ventilated patients. *Breathe* intends to implement a disruptive innovative care program to bridge the gap between intensive care and home care. Specifically, *Breathe* attempts to gain first mover advantages (Lieberman & Montgomery 1988) by offering *"outpatient weaning services,"* that is, the process of improving the respirator system to enable spontaneous breathing and liberation from mechanical ventilation. Due to the lack of institutional arrangements that legitimize weaning in the outpatient sector, the innovation project of *Breathe* faces at least two challenges. On the one hand, *Breathe* has to modify and create an appropriate institutional setting that specifies and supports outpatient weaning services. On the other hand, *Breathe* simultaneously needs to prepare corresponding readiness for action as a necessary internal precondition for offering such innovation services.

Our historical data show that, in the period from 2005 to 2013, *Breathe* made various efforts to establish as a high quality care provider. With the attempt to differentiate from non-specialized care providers, *Breathe* developed internal quality standards and in-house training

programs focusing on the specific needs of long-term ventilated patients. However, after eight years of negotiation with health insurance funds towards the legitimization and reimbursement of weaning services outside the hospital, *Breathe* faces higher costs rather than competitive advantages. Nevertheless, in 2013, demographic challenges and a threatening lack of medical and non-medical care providers put political institutions and organizations in the German healthcare sector under pressure in terms of changing the rigid established legal system to avoid a shortage of medical care. Having monitored the growing political importance of innovative care concepts that strengthen outpatient (respiratory) care, *Breathe* initiated a collaborative research project *(Breathe@Home)*. In cooperation with an interdisciplinary project consortium consisting of industrial, technical, and scientific partners, *Breathe* intends to proactively shape the future institutional setting with the intent a) to create a legal system that supports their idea of outpatient weaning and b) to gain orientation in terms of necessary readiness for action that fits these future (self-affected) institutional arrangements. In this process, the development of discharge criteria for patients with prolonged respiratory failure takes center stage. In general, the development and implementation of generalized discharge criteria constitute one example of the multiplicity of institutional arrangements that are required for the (politically desired) diffusion of integrative care concepts in Germany. In particular, *Breathe* recognizes that the specification of discharge criteria is an essential precondition for outpatient weaning services in terms of defining the rules that regulate the early transfer of ventilated patients from the inpatient to the outpatient sector.

In light of institutional theory, these discharge criteria can be characterized as proto-institutional. The criteria are elaborated upon with the attempt to shape the future practices of other actors in the field. Specifically, the discharge criteria constitute a rule that determines the time of patient transition from inpatient to outpatient care, depending, on the one hand, on the defined needs for medical treatment and care for the respective patient group at whom the rule is directed, and on the other, on the readiness for action of the outpatient care organization in terms of technical, qualification, and infrastructural conditions. The regulatory content of the discharge criteria will have a fundamental impact on the discharge practices of medical centers in the inpatient sector as well as on the practices of patient admission of outpatient care organizations intending to offer weaning services, if they are institutionalized in the field. The data show that the development process of these criteria is fundamentally based upon the joint definition and negotiation of the current and target processes through which outpatient weaning services may be realized. Having declared these criteria as a promising new regula-

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tion to change field-wide practices, rules, and norms, *Breathe* makes efforts to institutionalize them in terms of generating support for outpatient weaning services under certain circumstances. In particular, the data show that *Breathe* negotiates the regulatory content of the prospective rule with relevant stakeholders to gain legitimacy and to initiate the institutionalization and diffusion processes (Helfen & Sydow 2013; Zietsma & McKnight 2009).

Against the background of the aforementioned theoretical knowledge, discharge criteria, hence, are characterized as proto-institutions. Assuming that proto-institutions may be a construct designed to manage the interplay of institutional and organizational developments, this empirical study focuses on how *Breathe* attempts to manage these challenges via the development of the discharge criteria in order to generate a future fit and realize the innovative idea of "outpatient weaning."

Data Collection

Our data cover the period from 2005 to 2015, a period that starts with the entrance of *Breathe* into the market of outpatient ventilator care and ends in the beginning of 2015. The empirical analysis draws on process data, including 22 in-depth interviews, field notes, participatory observations and memos. All interviews were recorded and transcribed. The first 7 interviews were conducted between 2011 and 2012. These interviews primarily cover general information about *Breathe*, its history and objectives. The second round of interviews (2013–2015) specifically focuses on how *Breathe* manages the interplay of external and internal developments as they create discharge criteria (proto-institution). These primary documents were triangulated with an extensive set of secondary data, including press articles, corporate documents, presentations, etc. Table 1 provides an overview of the rich case study database.

Document	Number of Documents	Pages	Number of Interview Partners	Hours of Participating Observation
PRIMARY DATA				
Interviews 2013-2015	22	580	18	
Interviews 2011-2012	7	161	7	
TOTALS Interviews	**29**	**741**	**22**	
Field Notes	45	176,5		
Participating Observation	25			119,5
Memos	20	135		
TOTALS Primary Documents	**119**	**1052,5**	**22**	**119,5**
SECONDARY DATA				
Presentations	19	401		
Press Articles, Studies, Reports, Scientific Articles, Corporate Documents, TV-Reports, Websites	79	1942		
TOTALS Secondary Documents	**98**	**2343**		
TOTALS	**217**	**3395,5**	**22**	**119,5**

Table 1: Case Study Database

Data Analysis

Given the considerable scarcity of existing research on this matter, we used an inductive approach for our data analysis, but interpreted our findings in light of competence-based as well as institutional theories (iterative research design; Gioia et al. 2013). The analysis of the case study was conducted with the objective of exploring management activities performed externally aiming at shaping the institutional environment and those activities performed internally in response to this prospected institutional shift. Consequently, the interpretation of the data was informed by our knowledge about institutional and competence-based theories. Following common practice in qualitative data analysis, we used open coding ("in vivo codes") to identify relevant concepts in the data. Referring to Gioia and colleagues (Gioia et al. 2013), a constant iteration between theoretical and empirical data ensured that the concepts that emerged were informed by case study data, information about the field, and relevant literature. This process of induction was conducted in Atlas.ti and resulted in 267 first-order categories shaped by informant-language. Engaging in axial coding, that is, the continuous checking and re-checking of similarities and differences between the collected first-order categories in the data, we derived our first-order concepts. While these concepts help to understand how actors

try to shape field-level regulations and internally adapt to and prepare for these prospected environmental requirements in the process of proto-institutional development, they do not inform about the underlying theoretical concepts. Consequently, the next step was conducted and the first-order concepts were informed by preliminary theoretical findings. Finally, six theoretically framed second-order themes were derived. In accordance with Gioia and colleagues (Gioia et al. 2013), these themes were aggregated in the form of two dimensions. Aggregate dimensions link first-order concepts and second-order themes on a conceptual basis, in this case explaining how *Breathe* manages the balance of institutional developments and organizational readiness for action over time. Tables 2 and 3 illustrate the data structure that is the foundation for our multi-level model (Figure 1).

Next, we turn to our findings. We first present how actors try to create and shape institutional arrangements via proto-institutional work. Second, we show how they simultaneously manage their internal readiness for action to anticipate a fit with these future institutional requirements.

FINDINGS

This study attempts to extend innovation research by linking organizational and institutional levels of analysis. Specifically, empirical findings and theoretical knowledge are generated in order to understand the managed interplay of external and internal operations in innovation processes. On a theoretical level, this objective requires the integration of different perspectives, which can be realized via the consistent multi-level grounding of the CbTF. In focusing on what kind of managerial activities actors perform internally and externally in order to generate innovations in dynamic environments, this study informs competence-based research with firm-external, institutional thinking. The empirical analysis particularly explores how *Breathe* intends to develop future competitiveness in market-shaping processes via the development of discharge criteria, which have been characterized as a proto-institution.

Our data suggest two kinds of entrepreneurial activities that are central for the management of the co-evolution of external and internal developments. On the one hand, actors perform *Symbolic Legitimacy Management* aiming at shaping institutional regulations via the development of proto-institutions. On the other hand, actors simultaneously try to adapt their readiness for

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action on these prospected regulations via the performance of *Technical-material Adaptation Management*.

Symbolic Legitimacy Management

As actors attempt to shape the institutional framework by creating new institutional rules, they face the challenge of initiating and driving forward the diffusion and establishment of these rules. Our data suggest that actors perform *Symbolic Legitimacy Management* in order to address these external challenges. *Symbolic Legitimacy Management* encompasses the activities involved with developing new rules or regulations that are in (formal) consent with the existing regulations, logics, norms and interests. More specifically, our data indicate that actors embed new, innovative rules in the existing structures of norms and logics that are familiar to relevant stakeholders in order to cover their radical nature – in this case, the support of outpatient weaning services. Three entrepreneurial patterns of action constituting *Symbolic Legitimacy Management* can be identified: co-creation, signaling conformity, and embedding. The illustrative data structure is presented in Table 2.

First-Order Concepts	Second-Order Themes	Aggregate Dimension
Create common reference framework	Co-creation	Symbolic Legitimacy Management
Resolve tensions		
Define competence areas		
Create evidence	Signaling conformity	
Communicate reputation		
Show congruence		
Commence institutional inscribing	Embedding	
Engage in lobbying		
Attract attention		

Table 2: Data structure for *Symbolic Legitimacy Management*

Co-creation. The initiation of the development of discharge criteria can be traced back to the intention of *Breathe* to modify the established institutional setting and practices so that new regulations emerge that support their idea of an innovative care concept. However, data indi-

cate that *Breathe* is heavily reliant on the cooperation of relevant stakeholders in the field of respiratory treatment. On the one hand, *Breathe* is particularly dependent on the specialized knowledge of medical care providers. On the other hand, our data show that the diffusion and institutionalization of supporting discharge criteria require the acceptance and the support of relevant stakeholders, and especially require legitimacy from medical experts. Consequently, *Breathe* makes immense efforts to convince medical project partners of the importance of jointly developing discharging criteria.

Given the relatively low level of cooperation in the German healthcare sector, *Breathe* makes every effort to reduce established political conflicts, to define the competence areas of the different partners, to align divergent interests, and to generate a joint idea of "outpatient respiratory treatment services" at the beginning of the development process of the criteria. Our data as a whole indicate that *Breathe* continually works to create a cooperative atmosphere and ensure the emergence of legitimacy of discharge criteria on the project (i.e. meso) level.

Signaling conformity. The definition of the regulatory content of the discharge criteria encompasses the specification of appropriate patient groups for outpatient weaning depending on medical and care needs, the respective time of transition from inpatient to outpatient care of each group, and the qualification, technical and infrastructural prerequisites outpatient care organizations must meet to guarantee high-quality weaning services. However, the data show that this process is also pervaded by symbolic actions. For instance, *Breathe* makes various efforts to generate acceptance for the criteria both in cooperation with healthcare professionals (= on a meso level) and in the wider field (= on a macro level). More specifically, the development process of the potential institutional rule is formally conducted in line and in coherence with the existing legal framework, norms, and logics of the relevant stakeholders. The discharge criteria are conceptually aligned with the tenor of existing medical guidelines and the interests of important stakeholders, consisting of medical experts, healthcare politicians, patients, and representatives of health insurance firms. In this process, *Breathe* continually underscores the reputation of the participating actors, intending to enforce the trustworthiness of the developing criteria on something of a symbolic level. A further move toward signaling conformity can be seen in pretending "medical evidence" in the discharge criteria. Medical evidence is deemed as objective proof for the benefit of care concepts in terms of quality and cost in the healthcare field. However, since *Breathe* evaluates the benefit of the discharge cri-

teria primarily on a conceptual basis through "proof of concept" rather than through randomized clinical studies, the conformity to the healthcare logic can be interpreted as being mainly symbolic.

> *"Absolutely, well, I think this reflects what we have already talked about; of course, we have to create 'evidence' and quality indicators in order to generate arguments why someone has to pay for it. Well, I think that evidence is the elementary thing we need in order to discuss with health care funds; have a look, we have created this and that."*
> (Managing Director Breathe; ITW 18:43).

Moreover, *Breathe* has established an advisory board with relevant and important representatives from the German healthcare sector. Our data show that *Breathe* anticipates acceptance and legitimacy from these relevant stakeholders through their active participation in the development process of the criteria and through the conceptual alignment of the criteria with the logic of these stakeholders.

Embedding. Alongside co-creation and signaling conformity to existing institutional norms and logics, *Breathe* has also prepared for the integration of the discharge criteria into the established overarching institutional framework. The inscription of future institutional rules into existing structures is seen as prerequisite for their acceptance, implementation, and institutionalization. Because the implementation and support of the new criteria is central to the realization of the innovative care concept "outpatient weaning service," *Breathe* has attempted to enforce the perceived importance of discharge criteria on the societal level by making significant efforts to attract the attention of relevant stakeholders at conferences, by participating in committees, and by lobbying. Specifically, *Breathe* polarizes stakeholders by demonstrating the negative consequences of lacking discharge criteria. Over time, intentions to institutionally inscribe the new criteria into the overall institutional framework become apparent. For instance, *Breathe* continually shapes the discharge criteria to have the character of quality indicators. As quality indicators, they can be integrated into medical guidelines, accreditation guidelines for specialized weaning centers, and medical education programs, and thus become part of the quality assessment of health insurance firms with regard to the evaluation of outpatient care organizations.

> *"Well, in any case, the discharge criteria belong in the accreditation guidelines for specialized weaning centers. All accredited weaning centers are subject to the Wean-Net, which certifies almost all clinics. And this is where the criteria necessarily have to be named."*
> (Project manager Breathe; ITW 9:35)

[17]

These varied efforts to "embed" the discharge criteria into the existing institutional framework increase the diffusion and institutionalization of the criteria in the field.

Technical-material Adaptation Management

The dimension of *Technical-material Adaptation Management* addresses the entrepreneurial challenge that *Breathe* faces in its attempt to develop the required readiness for action in order to offer outpatient weaning services. While *Breathe* engages in the development and initiation of the institutionalization of discharge criteria – new rules that aim to shape field-level practices (*Symbolic Legitimacy Management)* – our data show that *Breathe* simultaneously considers the prospective consequences in case of their institutionalization with respect to organizational development needs. For instance, *Breathe* compares its current readiness for action to the performance requirements defined in the discharge criteria. Moreover, our data show that *Breathe* consistently adapts its internal resource and competence base to the evolving performance prerequisites. The proto-institution "discharging criteria" is thus used as a landmark for the ex-ante reconfiguration of the organizational readiness for action in order to realize outpatient weaning services. In particular, the dimension *Technical-material Adaptation Management* encompasses three entrepreneurial activities: fit scanning, first implementing, and hedging. Referring to Ansari and colleagues (2010), adaptation means the process of aligning organizational readiness for action with prospective environmental dynamics – or the other way around: the proactive alignment of future institutional regulations with the individually perceived capacity for change. The illustrative data structure is presented in Table 3.

First-Order Concepts	Second-Order Themes	Aggregate Dimension
Detect market opportunities	Fit scanning	Technical-material Adaptation Management
Identify resource & competence gaps		
Make process & infrastructure adaptations	First implementing	
Prepare organizational embedding		

Evaluate organizational changes	Hedging	
Prepare external scaling		

Table 3: Data structure for *Technical-material Adaptation Management*

Fit scanning. The data indicate that *Breathe* is granted the opportunity to have foresight into future market developments that are projected by medical cooperation partners in the development process of the new, potential institutional regulations for discharge. Due to lacking medical know-how and the dependence of *Breathe* on the support of medical experts, *Breathe* becomes aware that promising market and innovation opportunities can be only identified and addressed with the help of and access to the competences of the medical partners. Because the medical partners also have an interest in early, but structured, transition processes from inpatient to outpatient care, *Breathe* initiates cooperation with medical experts to define (infra-) structural, technical, and qualification criteria that have to be met by care organizations intending to offer outpatient weaning services. These performance requirements constitute an essential regulatory part of the discharge criteria. Our data show moreover that *Breathe* evaluates future market options that have been identified by medical experts with respect to their own competence gaps and development needs. During the process of the joint definition of discharge criteria, then, *Breathe* uses the emerging regulatory content as a landmark and guideline for the internal anticipation of its future development needs in the context of outpatient weaning.

> *For us, it is crucial that this is a future trend that we want to a) shape and b) have to learn necessarily. However, learning will only occur if you participate actively. We are firmly convinced that especially artificial respiration, non-clinical respiration and telemedicine will become enormous future trends.*
> (Medical Director Central Europe Headquarters; ITW 15:15)

First implementing. While *"fit scanning"* primarily focuses on the identification of individually perceived resource and competence gaps with regard to the implementation of an institution-compatible innovative care concept, the empirical data additionally indicate that *Breathe* *has* already started adapting to the evolving discharge criteria. For instance, *Breathe* continually rewrites its internal qualification and training programs, invests heavily in new hardware, and modifies its intra- and intersectoral processes consonant with the logic of the future discharge criteria. These organizational adaptations become more concrete over time: In the co-

operative negotiation process of the regulatory content of future discharge criteria, *Breathe* simultaneously adapts its organizational performance capacities to the co-evolving prerequisites for outpatient weaning. The discharge criteria, hence, are used as landmarks for the ex-ante preparation for a fit with the evolving discharge criteria. This fit will be mandatory for the realization of outpatient weaning services if the discharge criteria become institutionalized. The project manager of *Breathe* (ITW 12:31) concludes, *"(...) in principle, all [participants] learn through executing the project."*

Hedging. Our process data indicate that the submarket "outpatient ventilator care" can be characterized by institutionally induced uncertainty due to the absence of standards and adequate qualification criteria for organizations specializing in the care of patients with artificial ventilation. Since intersectoral and interdisciplinary cooperation have been uncommon practice in the German healthcare sector, actors moreover lack profound orientation in terms of standards for intersectoral-coordinated ventilated patient care. In fact, the submarket of outpatient ventilator care is characterized by a lack of qualification criteria, poor quality of care, and non-standardization. In their attempt to become established as a high-quality provider, *Breathe* has developed organizational capacities that it perceives as effective, efficient, and beneficial. Our data show that in the cooperative development process of the discharge criteria, *Breathe* has experienced for the first time the performance expectations of medical experts regarding high-quality outpatient care. This is seen as opportunity to evaluate and adapt the intra- and inter-organizational processes in real time with the help and know-how of relevant stakeholders.

> *"Sure, we have a sheet with a large number of data. And one or two of them are absolutely relevant for the clinic. But on the sheet are 28 other criteria, as well, that the clinic probably doesn't need. So, they must always go through the sheet and look for the data they are interested in."*
> (Head of Nursing Breathe; ITW 11:40)

The modification and evaluation of internal processes are first realized on a conceptual basis and finally tested in field tests. In this context, hedging means the implementation and evaluation of modified processes that are perceived to be more effective, efficient, and flexible with regard to (future) performance requirements. By involving representatives from health insurance firms, *Breathe* additionally evaluates and ensures compensation and reimbursement of the modified processes.

Taken together, our data provide deep insights into how *Breathe* performs *Symbolic Legitimacy Management* in order to address firm-external challenges and *Technical-Material Adaptation Management* to address the firm-internal challenges *Breathe* faces in the innovation process. More specifically, we get an idea of how *Breathe* makes efforts to symbolically align the proto-institution with the existing logics and institutional arrangements of relevant stakeholders *(Symbolic Legitimacy Management)*. Our data also show in detail how *Breathe* simultaneously anticipates and adapts its readiness for action ex-ante to the evolving performance requirements explicated in the discharge criteria *(Technical-Material Adaptation Management)*. The proto-institution thus provides hints in terms of existing resource and competence gaps in the context of outpatient weaning. Since *Breathe* has a profound impact on the design and content of the discharge criteria as well as on the constitution of its organizational readiness for action, we can see that *Breathe* is able to balance firm-external and firm-internal operations by developing a proto-institution.

DISCUSSION

While an impressive amount of work has extended innovation research, it is astonishing that a clear understanding of the link between firm-internal and -external challenges in innovation processes is still absent. Against this fundamental gap in research, this study was conducted in an attempt to explore and explicate the link of micro, meso, and macro levels of analysis in innovation processes. Drawing on and extending the consistent multi-level theoretical framework of the CbTF (Freiling et al. 2008), we have integrated competence-based and institutional thinking on a clear philosophy of science. In line with recent institutional argumentation, we study purposeful market-shaping operations with the help of the proto-institutional work concept, focusing on the early stages of actor-driven development and institutionalization processes of new or modified institutional rules. While research in the realm of proto-institutional work (Lawrence et al. 2002; Zietsma & McKnight 2009) highlights the meso and especially macro levels by studying how actors create and try to embed proto-institutions to shape field-level practices, the theoretical framework of the CbTF allows relevant insights not only into meso- and macro-level actions, but into micro-dynamics on the firm level, as well. Our data show that actors engage in the development of proto-institutions in order to a) create institutional arrangements that support their innovative idea and (perceived future) performance potentials, and b) ex-ante prepare the fit with these future institutional requirements by

adapting their organizational performance potentials during the managed interplay with the evolving proto-institution. Specifically, we argue that actors who attempt balancing future institutional and organizational developments face two kinds of challenges in the process of proto-institution development. With regard to firm-external challenges, actors need to perform *Symbolic Legitimacy Management*. We have identified three entrepreneurial activities that are aimed at the creation and initiation of the institutionalization process of a new institutional arrangement that supports the actors' innovative project. However, we have also shown that organizations consider their internal ability to change in this process: *"co-creation," "signaling conformity,"* and *"embedding"*. With regard to firm-internal challenges, actors cope by using *Technical-Material Adaptation Management*. That is, the ex-ante adaptation of the organizational readiness for action with the (self-affected) prospective institutional regulations – i.e., the proto-institution. As proto-institutions evolve, actors perform three entrepreneurial activities attempting to adjust their readiness for action for these developing institutional requirements: *"fit scanning," "first implementing,"* and *"hedging."*

A first contribution of this study is the theoretical conceptualization of "environmental dynamics" that have been sparsely addressed in competence-based research. In light of the Dynamic Capability Approach, the ability to innovate is interpreted as the continuous adaptation of resources and competences with regard to changing external performance requirements (Teece et al. 1997; Helfat et al. 2007). While little has been done to specify these external, environmental dynamics on a theoretical level, this study highlights the additional value of such a theoretical conceptualization by referring to the insights of institutional theory. The data show that the institutional setting takes center stage in innovation projects by determining which innovations are legitimized, which resources and competences are needed, and how organizations have to leverage their readiness for action in terms of generating fit with future performance requirements. Since institutional arrangements may act as diffusion barriers that restrict or impede the innovation efforts of organizations, the institutional framework may narrow the scope of organizational innovation activity (Caronna 2004; Ferlie et al. 2005), particularly in the case of disruptive innovation projects aimed at changing field-level practices.

These arguments have profound implications for competence-based research. Interpreted to the extreme, the line of reasoning of the Dynamic Capability Approach focuses on organizational phenomena, suggesting organizational adaptation to environmental dynamics as a core entrepreneurial challenge for competitive advantage and innovations (Teece 2007; Teece et al. 1997). While the Dynamic Capability Approach thus exclusively addresses managerial activi-

ties in innovation processes on the organizational level, this study elaborates that organizational adaptation is indeed an important means of generating innovations, but not the only nor always the most effective. We stress that a proactive modification of the institutional setting constitutes a further entrepreneurial challenge, as well. This empirical finding is compatible with the line of reasoning of existing research. On one side, organizational inertia may prevent internal change and adaptation with regard to changing environmental demands (Leonard-Barton 1992). On the other, innovations via organizational adaptation are hard to realize in uncertain environments resistant to institutional change, or when institutional change processes turn out to be contrary to the planned innovative projects. Hence, particularly in situations characterized by institutionally induced uncertainty, a purposeful and goal-oriented management of the institutional conditions is essential (Aldrich & Fiol 1994; Mair & Marti 2009; Puffer et al. 2010; Tracey & Phillips 2011; Zietsma & McKnight 2009) to generate landmarks that guide actors in the development process of organizational readiness for action and (disruptive) innovations.

Against this theoretical background, this empirical study argues that dynamic capabilities can be better understood by extending the exclusive focus on organizational adaptation to consider market-shaping activities in innovation processes. Based on empirical and theoretical evidence, we stress that management of dynamic capabilities manifests in the balance of future institutional and organizational development. We can show that in some situations there is a need to proactively influence institutional regulations to manage the fit with organizational performance and adaptation potentials. Hence, the ability to innovate is not the result exclusively of organizational adaptation, but of management of the institutional arrangements as well. Some suggest interpreting the institutional setting as an object for continuous observation and as an "adjusting screw" for a future fit with organizational performance potentials. In sum, the empirical findings highlight the importance of a proactive, simultaneous management of the institutional setting in the context of organizational innovation and renewal processes. The proactive management of the institutional setting can be thought of as ex-ante management of the fit or balance of institutional and organizational developments. In the context of capability development, there is a need a) to monitor (Schreyögg & Kliesch-Eberl 2007) and recognize internal demands for (future) institutional change, and perhaps b) to intervene – e.g. through proto-institutional work. This argument profoundly extends the assumptions of the Dynamic Capability Approach by simultaneously stressing management of the institutional framework for innovation capacity and for organizational renewal. Conse-

quently, dynamic capabilities are manifest not only in the management of internal aspects, but also external aspects.

A second contribution of this study can be seen in the extension and explication of proto-institutional work. This work involves first, the management activities aimed at the modification of the institutional setting via proto-institutions, and second, the simultaneous ex-ante management of organizational readiness for action with regard to evolving institutional arrangements. Proto-Institutions may thus be interpreted as an instrument with which the balance of institutional and organizational developments can be realized.

We began our empirical argument with a short elaboration on our assumption that proto-institutions might be an instrument for managing the co-evolution of institutional and organizational developments in innovation processes. We argued that successful proto-institutional work manifests in a continuous balance of institutional arrangements and organizational readiness for action, both laying the foundation for the realization of an innovative project. In line with research in the realm of the (proto-) institutional work concept, this study shows that actors create proto-institutions aimed at the modification of the institutional setting. Specifically, our study explicates the processes by which actors elaborate and initiate the institutionalization of new regulations. We note that actors cope via *Symbolic Legitimacy Management*; that is, the creation of a potential institutional rule that supports their innovative projects by considering existing institutional rules, norms, and logics of relevant actors. While this finding fits existing (proto-) institutional research (Hargadon & Douglas 2001; Helfen & Sydow 2013; Schüßler et al. 2014; Zietsma & McKnight 2009), our study exceeds the isolated focus on external challenges by elaborating the link to the organizational level of analysis. We show that proto-institutions simultaneously act as landmarks, providing foresight into the readiness for action that the prospected institutional dynamics will require. As the proto-institution – the*"institution in the making"* (Lawrence et al. 2002) – evolves and concretizes over time, actors benchmark their existing organizational readiness for action with the evolving regulatory content. Since proto-institutions thus indicate internal modification and development needs in order to address future windows of opportunities, proto-institutions may be seen as instruments with which actors may anticipate and adapt their organizational readiness for action ex-ante to the prospected environmental/ institutional dynamics. In introducing and explicating the entrepreneurial activities (*"fit scanning," "first implementing*," and *"hedging"*) that con-

stitute *Technical-Material Adaptation Management*, we provide deep insights into the organizational operations managed so as to co-evolve with the institutional dynamics. Taken together, our findings show that proto-institutions are not only instruments to shape future institutional arrangements, but also instruments to anticipate and prepare organizational readiness for action in terms of generating fit. Since proto-institutions thus link institutional and organizational operations, actors are able to balance these developments by first, estimating the speed and pace of change of external dynamics; second, exerting influence on these requirements; and third, adapting their organizational readiness for action to generate compatible performance potentials for market entry. Proto-institutional work can therefore be interpreted as the manifestation of dynamic capabilities, acknowledging both agency in terms of managing and balancing organizational readiness for action and firm-external dynamics. The twofold orientation and the proactive management of future institutional developments may lead to the avoidance of flexibility traps: Specific investments can be undertaken with respect to the anticipated future development of the institutional environment. We stress that organizational readiness for action plays an important role in market-shaping activities, as well. However, we consider that market-shaping is only relevant if the organization is able to address these future institutional performance requirements by simultaneously developing compatible readiness for action.

On a more aggregate level, this study shows that proto-institutions may have a double-sided impact. In line with recent institutional theory, they can be interpreted as means to trigger institutional change. Beyond that, our theoretical and empirical data additionally suggest the interpretation of proto-institutions as self-created landmarks, indicating needs in internal development to generate a fit with future performance requirements. While actors engage in the creation and scalability of a new institutional rule, they are able to a) shape field-level practices, and b) simultaneously manage the ex-ante fit internally by preparing corresponding resources and competences in order to realize their innovative idea. We thus interpret proto-institutional work as a dynamic capability that manifests in the successful balance of organizational and institutional operations over time.
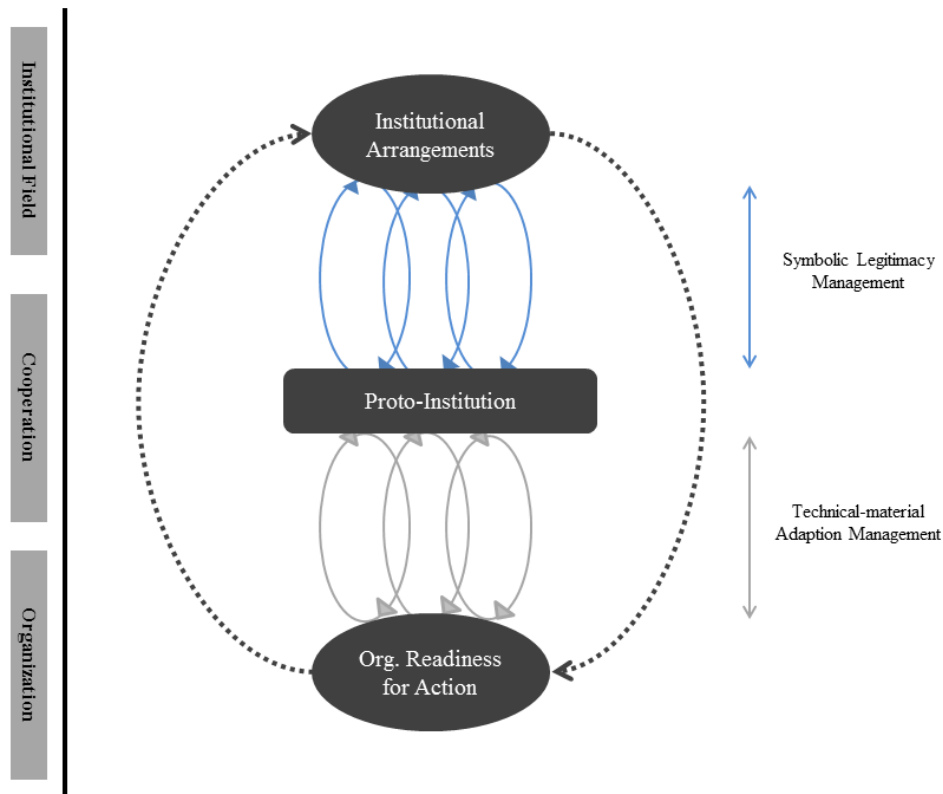
Figure 1: Multi-level model

CONCLUSION

Addressing a fundamental gap in research, this study attempts to inform innovation research by elaborating upon the link between micro-, meso-, and macro-level operations in innovation processes. We bridge strategic and organizational research on the consistent theoretical grounding of the CbTF, which was introduced in 2008 in *Organization Studies* as a process-oriented and multi-level theory. Based on an empirical single case study in the German healthcare sector, we generate empirical evidence and theoretical contributions for innovation research. First, this study stresses the importance of proactive management of environmental and institutional arrangements in organizational development processes. Second, it stresses the importance of multi-level analysis and process-oriented data in dynamic capability re-search. This means that not only unidirectional influences of institutions on organizations, but also bidirectional, recursive relationships, are important phenomena in innovation processes. Third, we stress the importance of multi-level theories like the CbTF, which allow for elabo-ration on theoretical models and the combined analysis of multi-level processes. Finally, we

show that environments characterized by institutionally induced uncertainty trigger the management of the balance of institutional and organizational operations in terms of generating the essential fit. While research in the realm of the Dynamic Capability Approach stresses continuous adaptation of organizational readiness for action in the dynamics of the (institutional) environment, we argue that market-shaping processes are also an important instance of dynamic capability development. Instead of more passive adaption processes, this study introduces proto-institutional work as being directly linked with a proactive, visionary reconfiguration of the organizational resource and competence base. Hence, proto-institutions can be seen as instruments to steer co-evolutionary developments and their balance in innovation processes. More specifically, the successful management of proto-institutions – of proto-institutional work – is understood as one manifestation of dynamic capabilities.

This study also has some important practical implications regarding future innovation abilities. In considering environmental arrangements as an adjusting screw to generate a future fit with internal performance potentials, actors can proactively manage their scope of innovation. Market-shaping activities may thus be seen as a possible arena for developing organizational capacities for renewal. Proto-institutions, then, may serve as instruments for the avoidance of flexibility traps. The management of the external environment provides guidance and influence with regard to future capability needs and questions of how to invest in internal development. Furthermore, the role of cooperative projects in organizational development processes is strengthened by the insight that actors can build new and leverage existing competences with the help and knowledge of relevant partners on a meso level.

However, this study also has a few limitations. To support our conceptual idea, we conducted an in-depth single case study in the German healthcare sector. In general, it must be acknowledged that generalizability cannot be claimed. Since healthcare regulations are a very nationally specific issue, this study may also have particular generalization problems regarding the application of findings to another country. Moreover, the market of outpatient weaning is characterized by high institutionally induced uncertainty, which triggers actors to engage in market-shaping processes. Hence, further research is needed regarding markets in other regulated or less-regulated sectors. Even given these limitations, the contribution is not diminished, as this study pursues the objective of theory extension through the exploration of new insights regarding the management of co-evolutionary processes (Yin 2014). Hence, future work may explore the impact and the relevance of proto-institutions not only in other healthcare systems, but in less regulated sectors, as well. This paper can be seen as a first step

in considering market-shaping activities in dynamic capability research. Further studies are needed in order to refine, reject or confirm our findings.

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