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The creation and spread of management knowledge – A social constructivist perspective

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Content

List of Tables

List of figures

1 Introduction

1.1 Research question and motivation

Formal organizations arise in and are bound to highly institutionalized contexts. As such, their formal structures and the practices they use are not solely driven by attempts to enhance efficiency and effectiveness but are strongly shaped by institutionalized beliefs that exist in the organizational context about rational and appropriate ways of designing, structuring and leading an organization (Meyer & Rowan, 1977). Adhering to these rational myths contributes to gaining and maintaining legitimacy and thus to securing the organization's survival (Suchman, 1995; DiMaggio & Powell, 1983; Scott, 2008). As evidenced by the various rational myths that have coined the organizational landscape (e.g. the organization as a machine, the human-centered organization, the learning organization, the lean organization), although representing relatively stable constructs, rational myths are neither unchangeable nor do they exist in isolation. Partly due to an increasing institutional complexity (Sahlin & Wedlin, 2008) and the often observed striving for novelty and differentiation of organizations (Eccles & Nohria, 1992; Abrahamson, 1996), within the last decades we have experienced an expansion of rational myths considering both their number and areas of application (Sahlin-Andersson & Engwall, 2002). Besides infiltrating an increasing variety of activities conducted in business firms, it has been argued that other types of activities – as carried out by, for instance, non-profit or public organizations – also require formalization and have to be managed in accordance with beliefs of rationality (Meyer & Rowan, 1977; Sahlin-Andersson & Engwall, 2002) and progress (Abrahamson, 1996; 1991), leading to an overall “managerialism” (Delbridge & Keenoy, 2010) and the expansion of beliefs about what constitutes “good” management (Sahlin-Andersson & Engwall, 2002). To be accepted as appropriate standards in ever new areas of application and to provide the appearance of newness, rational myths are adapted and new myths emerge resulting in the simultaneous existence of a large variety of myths.

But how do rational myths develop? To approach this question, I argue, it has to be understood what rational myths are in the context at hand. In the organizational context, rational myths capture established management knowledge about, among others, how processes are carried out and by whom, how employees are lead and motivated, how decisions are made or relevant constituents are addressed (Sahlin & Wedlin, 2008). This management knowledge is thereby continuously subject to change: While, for instance, most managers of manufacturing companies *knew* that building stocks is a promising strategy for buffering against all kinds of bottlenecks in the supply chain until the 1990s, stock is now considered as an indicator for inefficiencies and thus as waste indicating that by securing process reliability stocks can be avoided and supply chain processes can be optimized; while it was part of a manager's knowledge that quality can be assured when extensive quality controls are carried out by a few well-equipped workers after a good has been finished, today's managers *know* that high and constant quality can only be guaranteed when controls are continuously conducted after each production step and when each employee is given sufficient qualification and responsibility for detecting and resolving quality problems.

This rule-like and application oriented knowledge in most cases can only achieve a status of taken-for-grantedness and potentially become rational myth when it is labeled and thus becomes a transportable knowledge object. As a result, this knowledge is captured in popular organizational practices such as Lean Management – providing abstract knowledge in the form of tools and ideas for restructuring the value chain aiming at waste reduction in order to solve the organizational problem of inefficiencies (Womack, Jones, & Roos, 1990) – Six Sigma – providing methods for statistically analyzing quality conformance and tools for implementing quality assurance in organizations aiming to achieve a stable and high quality (Eckes, 2001) – or Shareholder Value Management – providing rules for collecting financial data used to make (investment) decisions that lead to the creation of shareholder value (Rappaport, 1986). Language thus plays a crucial role when it comes to the creation and modification of accepted management knowledge, because in order to be stored and transmitted on a larger scale, knowledge has to become encoded in some system of signs (Berger & Luckmann, 1966; Phillips, Lawrence, & Hardy, 2004; Meyer R. , 2004).

But even when packaged in catchy phrases, recognizable labels and equipped with meaningful symbols, knowledge objects do not flow and become part of the accepted stock of management knowledge automatically. Instead, it has been argued that socially legitimated actors engage in the development and spread of knowledge objects (Strang & Meyer, 1993). Researchers, consultants, “gurus”, producers of business press discourse have often been described as important carriers (Sahlin-Andersson & Engwall, 2002), fashion setters (Clark & Greatbatch, 2003; Abrahamson, 1996) or institutional entrepreneurs (Etzion & Ferraro, 2010) who are actively involved in promoting new managerial ideas and thus shaping the existing stock of management knowledge. Alongside the increasing general managerialism (Delbridge & Keenoy, 2010) and the expansion and spread of management knowledge (Sahlin-Andersson & Engwall, 2002) within the last decades we have observed the emergence and proliferation of a whole industry or market for management knowledge consisting of – among others – business schools offering management education programs and consulting firms offering support for organizations implementing modern management concepts (Clark, 2004; 2001; Eccles & Nohria, 1992).

Following the argument that social actors may develop and change management knowledge by the use of language and symbolic elements, existing empirical research has focused on detailing this argument by identifying specific circumstances under which new – or apparently new – managerial ideas emerge and establish. A large amount of influencing factors has thereby been identified pointing to the importance of language and different types of social actors activating channels of diffusion through the use of language: It has been shown that ideas have good chances to successfully spread when relevant organizational problems and performance gaps are promoted and brought to potential adopters’ attention for which the new ideas promise to provide potential solutions (Abrahamson, 1996), when there exist prominent “gurus” persistently promoting management ideas in presentations, seminars and texts (Huczynski, 1993; Clark & Lane, 2003), when prominent best practice cases and success stories of organizations in which the ideas have already been successfully adopted are illustrated and spread by consulting firms (Kieser, 1997), when the attention of prominent media is created for new management ideas (Abrahamson & Fairchild, 1999), when new management ideas become part of management education programs (Palmer, Jennings, & Zhou, 1993) – to name just a few (for an overview of influencing factors see, for instance, (Carson, Lanier, Carson, & Guiry, 2000; Kieser, 1997; Bezemer, Karsten, & van Veen, 2003). What all of these factors and the underlying conceptual and empirical work have in common is that they apply to the spread of single management ideas. They point to favorable characteristics of these ideas, how they should be communicated and by whom, and to diffusion channels promising a successful spread of these ideas.

To capture the underlying activities carried out by social actors conceptually, the concept of theorization has prevailed. Strang and Meyer (1993, p. 492) have defined theorization as the "self-conscious development and specification of abstract categories and the formulation of patterned relationships such as chains of cause and effect." They have further argued that theorization processes are conducted by "culturally legitimated theorists" (ibid: 494). The concept of theorization thus captures several relevant and analytically dividable aspects of knowledge production which are addressed in this dissertation: First, emphasizing the importance of abstraction, the concept points to the relevance of social construction processes for the development and spread of ideas. Through abstraction, intersubjectively understandable knowledge can be produced. Second, emphasizing the need of *formulating* patterned relationships points to the importance of language capturing this abstract knowledge. Only then, the concept proposes, management ideas can spread by the use of, for instance, media channels or through network relations. Third, the concept points to the relevance of certain social actors who function as theorizers and by this means contribute to attracting attention for new management ideas and activating typical channels for spreading these ideas. Fourth, and so far rather implicitly, the concept enables us to develop an understanding of how management knowledge is produced and changed while taking into account that this does not happen on a green field but that this process depends on the existing management knowledge. Due to its capacity to capture several aspects of knowledge production the concept of theorization has become a central conceptual starting point for thinking about these processes.

However, despite the overall attention the concept of theorization has received in the past, four major shortcomings of existing literature can be identified: First, most studies have focused on the outcomes of these processes – such as the degree of diffusion (Green, Li, & Nohria, 2009), prevalence (Etzion & Ferraro, 2010) or legitimacy (Greenwood, Suddaby, & Hinings, 2002) – and not the process of theorization, its underlying patterns and rules. I thereby argue that a precondition for understanding and interpreting potential consequences of theorization is to develop a deeper understanding of the process of theorization itself.

Second, although it is generally argued that in their attempts to change the stock of knowledge in a social context, theorizers' actions are restricted by this very social context (Meyer R. , 2008; Meyer J. , 1996; Green, Li, & Nohria, 2009), there is a lack of empirical studies addressing this aspect of theorization in detail. Empirical studies have focused on identifying how – by the use of what rhetorical strategies and through activating which media or relational diffusion channels – social actors have (successfully) shaped and promoted ideas (Etzion & Ferraro, 2010; Greenwood, Suddaby, & Hinings, 2002; Soule, 1999; Green, Li, & Nohria, 2009). Questions considering the antecedents of decisions of theorizers with regard to their theorizing work have remained unanswered. As a result, we lack a detailed understanding of the consequences of the social embedment of theorizers on the process of theorization.

Third, there is a lack of work linking cultural and structural views towards understanding the development and spread of ideas. From these two views, two rather separated streams of research have evolved, partly based on different theoretical arguments and applying different research methods (Strang & Soule, 1998). Proponents of the structural view investigate how ideas spread within fields and populations through network ties (Granovetter, 1992; Burns & Wholey, 1993) or are driven by structural equivalence and competition (Burt, 1987; Galaskiewicz & Burt, 1991; Fligstein, 1985) and how members of fields and populations gain access to new ideas through external sources such as change agents or mass media (Burns & Wholey, 1993). Different from that, work that can be assigned to the cultural perspective has emphasized the importance of interpretative work for the development and spread of ideas and has focused on investigating knowledge communities and the discourses they produce (Fiss & Hirsch, 2005; Green S. E., 2004; Greenwood, Suddaby, & Hinings, 2002). However, acknowledging that each view is "is only [one] part of the story" (Strang & Soule, 1998, p. 276), implicitly calls for further integrating these views.

Fourth, existing research has focused on how theorizers connect new knowledge objects to characteristics of potential adopters (Strang & Meyer, 1993; Kieser A. , 1997) or to dominant norms, logics and values within organizational fields (Etzion & Ferraro, 2010; Greenwood, Suddaby, & Hinings, 2002; Fiss & Zajac, 2006) and has neglected potentially relevant connections to co-existing knowledge objects. What has often been stated but not discussed and analyzed in detail is that new ideas are not developed in a vacuum but that there already exist other ideas emerging and diffusing at the same time or representing part of the accepted stock of management knowledge (Sahlin & Wedlin, 2008; Abrahamson, 1996). Processes of combining new and existing ideas thus should be observable and relevant for understanding how management knowledge is produced. Accordingly, it is argued that "combining existing knowledge is the key process for new knowledge creation" (Tsai & Wu, 2010, p. 441). Emerging ideas may thereby compete for the attention of prominent researchers or consultants potentially acting as gurus and for implementation resources in organizations; new ideas may replace older ideas by providing more sophisticated solutions for similar organizational problems; existing ideas may smooth the way for new ideas which are based on similar principles or follow a similar logic and potentially complement existing ideas. These and other potential ways of how management ideas might interact while being discussed and potentially applied in organizations should influence the question whether new management ideas become part of the accepted stock of management knowledge – or not.

With this dissertation I aim to contribute to closing these research gaps and I focus on identifying antecedents of theorization and its underlying rules while accounting for different types of theorizers and different settings. With the three papers all of which are centering around the idea to identify mechanisms and observable patterns of theorization processes, I am thus able to provide some answers to the following question: How does management knowledge change and how do rational myths evolve? Why are there so many rational myths out there, simultaneously shaping the organizational landscape? To do so, I take a social constructivist view on knowledge production and I draw on arguments from the sociology of knowledge (Berger & Luckmann, 1966; Schütz, 1967). I conceptualize knowledge production as a social construction process in which certain social actors contribute to develop, formulate and promote new management ideas. Being socially legitimated, these social actors contribute to enhancing the chances of the management idea to become an established part of "what counts as knowledge and truth – and what does not" (Meyer R. , 2008, p. 522) in the organizational context. Tracing the concept back to its phenomenological origins in the sociology of knowledge I extend and detail the existing and so far rather implicit conceptualizations of theorization.

In the first paper with the title *„Theorization as combination: How combining organizational practices in texts contributes to the production of management knowledge"* which is co-authored by Florian Scheiber and Achim Oberg, I thereby investigate how management knowledge objects are combined in academic and business press texts. Based on a qualitative and quantitative analysis of the co-occurrences of pairs of 53 different knowledge objects, I find that combining knowledge objects represents a relevant element of theorization, thereby following certain rules concerning which knowledge objects are combined. I find that, when knowledge objects are combined in texts, these acts of theorization are driven by attempts to (1) *leverage* a focal knowledge object by borrowing from co-existing knowledge objects' legitimacy, (2) to *differentiate* a focal knowledge object from co-existing knowledge objects potentially competing for attention or (3) to *embed* a focal knowledge object in the appropriate discourse on related co-existing knowledge objects. Conceptually, the first paper thereby takes a central role in this dissertation since I develop a more detailed and thorough theoretical basis for the concept of theorization and major arguments for this dissertation. In addition, by analyzing co-occurrences and showing that they can be regarded as theorizing acts I provide a new empirical approach for capturing processes of knowledge production. Taken together, with this paper I contribute to existing research through focusing on the process of theorization itself and thereby taking into account that knowledge objects emerge in a context in which other knowledge objects co-exist.

In the second paper with the title *"Antecedents of symbolic adoption: Popular organizational practices on the internet self-representation of the 500 largest firms in Germany"* I investigate the self-representation of organizations and thereby approach theorizing work of a rather understudied type of theorizer – the (potentially) adopting organization. This paper is a joint work with Florian Scheiber, Achim Oberg and Michael Woywode, while Florian Scheiber and I contributed equally to this paper. The starting point of this paper is the observation that the self-representation efforts of organizations strongly differ, although – according to current research (Fiss & Zajac, 2006; 2004) – organizations may generally benefit from displaying conformity with beliefs about rational and "good" management within their self-representation. Understanding on which basis organizations decide about which organizational practices representing state-of the-art management knowledge they talk and which are not considered in their self-representation, thus represents a promising approach towards understanding the role of this type of theorizer in the production and spread of management knowledge. To approach this question empirically, I develop and analyze a unique dataset consisting of references to 16 different organizational practices within the internet self-representations of the 500 largest firms in Germany. I thereby find that internal and external characteristics both enable and delimit organizations in their self-representation efforts. These insights support the social constructivist view that theorizers are affected by the social contexts they are bound to. Identifying the antecedents of decisions of theorizers considering their theorizing work I contribute to develop a deeper understanding of how the social embedment of theorizers influences their theorizing work.

In the third paper with the title *“Relationship quality or consulting firm features? When medium-sized companies recommend consulting firms”* which is co-authored by Thomas Armbrüster, I investigate on which cognitive basis organizations decide whether to circulate knowledge on consulting firms through network relations by making recommendations. Consultants have thereby often been considered as strongly influencing the creation and spread of management ideas (Clark, 1995), through marketing them to various client organizations and through contributing to business press discourse on “new” and “innovative” management ideas. As such, consultants can be described as representing important theorizers. When being recommended, consulting firms potentially get access to new customers to whom they can “sell” new management ideas. Recommending organizations are thereby conceptualized as go-betweens who contribute to creating intersubjective meaning and can thus be regarded as theorizers in this specific context. Taken together, in this paper I investigate when organizations decide to function as theorizers who – through their theorizing – open up diffusion channels for consulting firms, thus strengthening consulting firms in their function as theorizers. On the basis of a quantitative survey I find that recommendation decisions are based on the organizations' experiences and seem to be made with caution. In general, by applying a social constructivist conceptualization to a setting in which knowledge is transferred through network relations, with this study I contribute to bridging the existing division between a structural and a cultural view on the production and spread of management knowledge (Strang and Soule 1998). My insights allow for the conclusion that in order to understand how structural mechanisms work, the underlying cognitive processes have to be understood.

Taken together, with these three papers I conceptually and empirically contribute to developing a deeper understanding of the process of theorization, relevant theorizers and their roles in knowledge production and the channels over which they engage in theorization efforts. Before presenting a more detailed description of the three papers which are part of this dissertation and discussing how each of them contributes to answering the overall research question, I provide some definitional clarity to the major terms used in this dissertation and I shortly present the relevant literature. I start with characterizing management knowledge by referring to different streams of research participating in defining and investigating management knowledge. Arguing that management knowledge is created and spread by certain social actors through contributing to the development of agreement considering the meaning of ideas and activating diffusion channels, I continue with providing a short overview of existing work in which different types of relevant social actors were identified. On the basis of existing literature, its insights and shortcomings, I argue that the concept of theorization helps us to capture the processes of management knowledge production and spread.

1.2 Definitions and relevant literature

1.2.1 Characterizing management knowledge

Management is a general concept related to the steering of processes and activities carried out in organizations, thereby covering a large variety of areas of application. As such management "is not associated with particular types of activity, but rather with where, how and by whom activities are carried out" (Sahlin-Andersson & Engwall, 2002, p. 5). In this view, management knowledge provides answers to these questions. In a similar vein, in traditional and strategic management research, management knowledge is conceptualized as providing rules for designing structures, processes and roles in organizations and as providing principles and behavioral guidelines for resolving all kinds of organizational problems (Teichert & Talaulicer, 2002). Research in this field engages in identifying and describing management knowledge which consists of sets of rules for organizing and which can be captured in organizational practices – such as Blue Ocean Strategy (Kim & Mauborgne, 2005), Shareholder Value Management (Rappaport, 1986), Lean Management (Womack, Jones, & Roos, 1990), or Business Process Reengineering (Hammer & Champy, 1993). Empirical work that can be assigned to this stream of research focuses on adoption and implementation behavior of organizations, investigating how abstract rules as provided by modern organizational practices are applied in the organizational context and with which consequences for employees, processes, and structures (Pfeiffer & Weiss, 1994; Jensen, 2004; Rank & Scheinpflug, 2008). However, delimiting management knowledge to this action-oriented level, I argue, might lead to a solely descriptive, local and static understanding of management knowledge. In order to spread across organizations, industries and countries, there has to be more to management knowledge than its rule-based content.

And, according to researchers referring to management fashion arguments or more general institutional arguments, there is: management knowledge is also described as having a symbolic level on which action-oriented rules and principles are packaged (Bezemer, Karsten, & van Veen, 2003; Sahlin-Andersson, 2000; Abrahamson, 1996). Recognizable labels are thereby probably the most important, while not the only symbolic elements (Kieser & Walgenbach, 2010; Meyer R. , 2004). Such packaging of abstract knowledge fulfills two major functions both supporting the spread and acceptance of management knowledge among theorizers and potential adopters: First, there exists strong consensus among researchers from different theoretical camps and practitioners that applying management knowledge which provides rules for organizing which deviate from how things have been done in the organization so far, is a challenging task requiring intensive communicative efforts (Kieser, Hegele, & Klimmer, 1998). In order to create understanding and acceptance for new ideas and the expected consequences for the organization among employees and potentially also among other affected types of stakeholders such as customers or the public in general, labels and other symbolic and rhetoric devices (e.g. metaphors) play a central role (Kieser & Walgenbach, 2010). Second, packaging abstract knowledge makes them more easily transportable within and across social contexts. For this purpose, the existence of recognizable labels and catchy phrases arousing certain images among potential adopters and other parts of the relevant audience about how the captured knowledge may contribute to resolving a relevant organizational problem plays an even more important role.

In my dissertation I consider both the rule-based/application oriented and the symbolic level of management knowledge. Besides taking into account the two levels of management knowledge, in my conceptualization I also point to the fact that the existing management knowledge consists of a variety of knowledge objects each of which comprises a set of rules and labels or other symbolic elements. As already indicated above, organizational practices such as Total Quality Management, Management by Objectives or Corporate Social Responsibility represent popular instances of management knowledge objects. In this view, a variety of knowledge objects co-exist at the same time, thereby potentially competing for attention, peacefully co-existing or even supporting each others' spread and persistence. Taken together, these knowledge objects represent what I will in the following describe as the social stock of management knowledge which “delineates the boundaries and the ‘horizon’ within which [actors in the organizational context] can meaningfully act – and beyond which it is impossible [for them] to see or to understand” (Meyer R. , 2008, p. 521).

Explicitly addressing this aspect of management knowledge helps us to clarify what is actually produced, spread and expanded – and thus to more exactly specify the subject of investigation when reviewing the literature on management knowledge. Most empirical studies investigate the development of new knowledge objects which then spread within or across, for instance, industries and countries and thereby eventually become part of the accepted stock of management knowledge (Palmer, Friedland, Devereaux, & Powers, 1987; Zbaracki, 1998; Westphal & Zajac, 1994; Thawesaengskulthai & Tannock, 2008). Expansion of management knowledge – as it is treated in the literature (Sahlin-Andersson & Engwall, 2002) – then consists of two empirically coinciding but analytically dividable elements: Expansion happens when new knowledge objects become part of the stock of management knowledge without replacing other knowledge objects in the same area of application meaning that the number of objects representing the stock of management knowledge increases. In addition, one speaks about expansion when existing or new knowledge objects are translated to new areas of application – a phenomenon often being described as "managerialism" (Delbridge & Keenoy, 2010). In this case, the number of existing knowledge objects might remain the same. In this dissertation I am mainly interested in the first element of knowledge expansion, namely how knowledge objects are developed and become part of the accepted stock of management knowledge.

1.2.2 Characterizing management knowledge communities

As we have experienced especially within the last decades where an increasing number of organizational practices was simultaneously discussed and adopted or rejected in the organizational context, the social stock of management knowledge is not static but continuously subject to change. That does, however, not mean that changing the knowledge base takes place automatically or is an easy task which can be conducted by any actor in the organizational context. Instead, only certain social actors actively contribute to the production and spread of new – or apparently new – knowledge objects (Berger & Luckmann, 1966). They fulfill these functions as they "discuss, interpret, advise, suggest, codify, and sometimes pronounce and legislate [and] develop, promulgate, and certify some ideas as proper reforms, an ignore or stigmatize other ideas" (Meyer J. , 1996, p. 244). By this means they are able to draw attention to certain ideas and influence the perceptions and meanings of other actors in the organizational context concerning these ideas. In this view, ideas do not necessarily flow because of their characteristics and contents but rather because of by whom they are promoted and how (Czarniawska & Sévon, 2005; Czarniawska & Joerges, 1996)

Two major factors have been identified indicating whether social actors will contribute to shaping these processes. First, arguing from a market-oriented perspective from which relevant social actors are described as fashion setters (Abrahamson, 1996; Abrahamson & Fairchild, 1999), it has been argued that social actors deliberately engage in producing and spreading knowledge objects in order to "[market them] to fashion followers" (Abrahamson, 1996, p. 263). Researchers taking this view in which management knowledge objects represent "cultural commodities" (ibid: 263) have thus focused on what motivates social actors to invest time and effort. Second, in order to be able to influence collective beliefs about good and appropriate management, social actors have to be socially legitimated (Strang & Meyer, 1993). As such, this second stream of research focusing on cultural arguments for knowledge production and spread mainly points to the conditions under which social actors are able to contribute to these processes. However, whether emphasizing motivational or ability-based preconditions, similar types of actors have been identified functioning as important fashion setters (Abrahamson, 1991), carriers (Sahlin-Andersson & Engwall, 2002), institutional entrepreneurs (Etzion & Ferraro, 2010) or theorizers (Strang & Meyer, 1993) who contribute to the development and spread of management knowledge, indicating that both of these aspects should work in combination.

Academics and scientists have been described as influencing social actors in the realm of organizations. Not only is the production of knowledge described a "major goal for any research community" (Tsai & Wu, 2010, p. 441), representing culturally legitimated social actors, academics and scientists also have the capacity to persuasively promote their ideas (Strang & Meyer, 1993) through educational activities and through publishing their research results in academic journals and thus substantially coining the academic discourse. Contributing to the education and thus socialization (Schein, 1968) of organizational members – and especially those in leading positions – professors and lecturers at business schools also shape what is considered as state-of-the-art management knowledge (Eccles & Nohria, 1992; Palmer, Jennings, & Zhou, 1993). In a similar vein, consultants have also been increasingly considered as creating and strengthening rational myths (Clark, 1995) not only through marketing organizational practices to various client organizations, but also through conducting surveys on the use of modern management tools whose results often get attention from the business press (Rigby & Bilodeau, 2009). Prominent individuals in the organizational context – be it, for instance, academics or consultants – may thereby function as "gurus" actively engaging in creating and promoting new ideas in presentations at professional conferences, in seminars which are often attended by managers, through publishing books and launching stories in the business press (Huczynski, 1993; Clark & Lane, 2003). The business press has thereby been described as representing a "strategic checkpoint" (Hirsch E. , 1972, p. 643) for the spread of ideas and knowledge objects. It does thereby function as an important gatekeeper in the diffusion of management knowledge (Hirsch P. M., 1986; Hirsch & De Soucey, 2006) and as a key source of information shaping managerial decision making (Burns & Wholey, 1993; Deephouse & Heugens, 2009; Sahlin & Wedlin, 2008). Producers of business press discourse thus have the capacity to "block" or "facilitate" the development and change of the social stock of management knowledge. In addition, with the proliferation and expansion of management knowledge we have only recently experienced a growing emphasis on (potentially adopting) organizations as contributing to producing and shaping the management knowledge base (Sahlin & Wedlin, 2008; Thomas, 2003; Cole, 1992). Especially large and centrally positioned organizations have been shown to function as role models (Cole, 1992): Through reporting on how they have successfully implemented modern organizational practices within their self-representations or through pitching such success stories in the business press, organizations may actively influence what is considered to be part of the accepted stock of management knowledge (Fiss & Zajac, 2006). Taken together, all of these actors are thereby equipped with “interests, resources, identities and abilities,” (Meyer J. , 1996) allowing them to develop, shape and promote management ideas. At the same time, representing *social* actors, their actions are delimited by the social context they are part of. As such, they are bound to and influenced by the social stock of management knowledge they are about to change.

Despite certain similarities between different streams of research in which relevant actors are identified – such as the management fashion research, the research on organizational change and on management knowledge creation and spread – some differences can also be observed. One difference addresses the “level of aggregation”. While the terms fashion setters and carriers have to a large extent been applied to collective actors such as consulting firms, business schools or media companies (“gurus” represent an exception), the concept of theorizers is mainly applied to the level of individuals and the roles they fulfill such as experts, consultants, academics, journalists (Strang & Meyer, 1993). I would argue that the latter conceptualization is better able to account for different potential combinations of social actors and discursive channels and thus allow for a finer-grained understanding of processes of knowledge production: For instance, individuals may serve as academics when publishing the results of their research in academic journal. In addition, the same individuals may take over the role of experts when reporting on their findings in management magazines. Although produced by the same individual, the resulting texts as part of the respective discourses may strongly differ. Taking a social constructivist perspective in which knowledge is created through discursive processes of meaning construction in texts (Phillips, Lawrence, & Hardy, 2004; Green S. E., 2004) I am mainly interested in identifying and capturing relevant types of discourse. Taking the above descriptions together, the following types of relevant discourses can be identified: academic, business press and organizational discourse.

A second difference is concerned with the role of organizations. The set of fashion setters and carriers is often limited to what is also described as the supply side of the management knowledge community. In contrast, organizations are often presented as rather passive adopters, followers (Abrahamson, 1996) or their role is captured through looking at the knowledge objects they apply in the form of practices (Sahlin-Andersson & Engwall, 2002, p. 14) but they are not conceptualized as actively engaging in creating and shaping this existing management knowledge. In contrast, conceptualizing organizations as theorizers allows us to consider them as actively involved in shaping the social stock of management knowledge.

1.2.3 Introducing the concept of theorization

Taken together – and as already described above – the concept of theorization represents the major theoretical concept in this dissertation. Capturing several aspects of knowledge production it enables us to develop a deeper understanding of the underlying processes, the rules it follows and the roles that theorizers play: Different types of theorizers label and discuss management ideas in discourses. In their discursive actions they are thereby bound to the social context they are part of. This embedment of theorizers should have two partly paradox implications: Being a legitimated part of the social context enables social actors to act as theorizers. At the same time, the social context delimits the possibilities theorizers have in how (extensively) they engage in theorization activities. Through processes of theorization management ideas become knowledge objects that are transportable within and across social contexts and which then eventually become part of the accepted stock of management knowledge. Whether this is accomplished, partly depends on how they are connected to or embedded in this stock of knowledge. The embedment argument thus holds for both, theorizers and the knowledge objects they develop and discuss.

Using the concept of theorization thereby requires relating it to other theoretical concepts which are often used to capture the development and flow of ideas. Within the last years, these processes have often been conceptualized as processes of translation (Czarniawska & Sévon, 1996). In this view, ideas are translated into objects (which might be texts, pictures or prototypes) which are than translated into actions. Through repetition and stabilization actions are translated into institutions which might be then translated into new ideas and images. As such, this chain of translations can be described as a spiral model in which ideas travel across time and space, thereby not remaining unmodified but becoming subject to change and adaptation (Czarniawska & Joerges, 1996, p. 46). Taken together, the concept of translation is applicable to various processes along the travels of ideas and thus represents a rather general theoretical construct. It aims to provide answers to the question how ideas and images are materialized into objects and actions and how, through processes of disembedding and reembedding, they can travel over time and space. Relating these arguments to the context of this dissertation, it can surely be argued that each academic and business press article and each organizational webpage in which references to management ideas can be found can be considered as materializations of these ideas and that this materialization is created through translating ideas to the specific localized time and space of the respective theorizer.

However, despite the general applicability of the concept of translation I refrain from using it as a key theoretical concept in this dissertation and I decide to describe the processes that are captured in this dissertation as theorization for several interrelated reasons: First, although it is mentioned that “it is the people, whether we see them as users or creators, who energize an idea any time they translate if for their own or somebody else`s use” (Czarniawska & Joerges, 1996, p. 23) and who are thus responsible for initiating and channeling the travels of ideas, there is given much less attention to scrutinizing who these people are in the concept of translation than in the theorization literature. The concept of theorization is more explicit about who are the social actors that engage in theorizing processes and how and why they are able and willing to do so. Second, although translation does not necessarily imply that travelling ideas are strongly changed and adapted when moving over time and space, the term itself indicates that ideas and images are modified when being materialized in objects and actions: The "richness of meaning, evoking associations with both movement and transformation, embracing both linguistic and material objects“ (Czarniawska & Sévon, 1996, p. 7) is a central aspect of translation. Although this surely holds for the case of management knowledge objects, in this dissertation I rather focus on the development of that part of meaning which is intersubjectively shared and understood rather than identifying potentially alternative interpretations. The concept of theorization which explicitly aims at developing general models and categories seems to be more appropriate for fulfilling this purpose. In this view, and third, theorization is strongly related to the idea of objectification and the development of typifications that to a large extent characterize the first phase of translation in the travels of ideas in which ideas are translated into objects. One way of objectifying is thereby turning ideas into "linguistic artifacts by a repetitive use in an unchanged form, as in the case of labels" (Czarniawska & Joerges, 1996, p. 32). The authors describe this attempt as a mechanical translation which aims "at a reproduction […] intended to minimize displacement efforts" (ibid: 32). They further point to the importance of these attempts in cases in which new ideas have to be fitted to and embedded in existing patterns of objects and actions. Above I have argued that linking new ideas to the existing knowledge base represents a central aspect of management knowledge creation, and, thus, a key element of processes of theorization. As such, theorization can be described as a specific type or application of translation. On the one hand, being more specific indicates a lower generalizability of insights and findings, but, on the other hand, it allows for focusing on idiosyncrasies with regard to mechanisms, patterns and rules.

Based on this broad understanding of the concept of theorization I shortly describe the three papers which are part of this dissertation in the following. Two remarks are thereby of interest: First, the first paper takes a central position in this dissertation. In this paper I strengthen the theoretical basis for the whole dissertation by tracing the concept of theorization back to its phenomenological sources in the sociology of knowledge. Second, representing discrete papers which are written to partly different research communities (the first paper explicitly addresses management knowledge and theorization research; the second paper is rather written for the institutional community interested in (symbolic) adoption of organizational practices; with the third paper I mainly speak to the consulting research and the social network communities), the detailed theoretical basis and lines of argumentation may deviate from the ones presented in this introductory chapter. I point to which aspects of theorization are mainly addressed in each paper and how each paper thus contributes to enhancing our understanding of how rational myths develop and spread in the following short description and the concluding chapter of this dissertation.

1.1 Short description of the three papers

1.1.1 Theorization as combination: How combining organizational practices in texts contributes to the production of management knowledge

In the first paper I address the following question: How does new management knowledge become connected to the existing stock of established management knowledge? Answering the question, I argue, requires tracing the concept of theorization back to its phenomenological roots in the sociology of knowledge (Berger & Luckmann, 1966; Schütz, 1967). On this basis I develop the following theoretical setting. Explaining how managerial ideas become part of the accepted stock of knowledge requires analyzing and interpreting how all individuals in the relevant social context come to agree upon the meaning they attach to these ideas (Weber, 1978). This creation of such "intersubjective meaning" (Scheff, 2005) is thereby possible because individuals work with reciprocal typifications of actors, actions and situations (Schütz, 1967; Schütz & Luckmann, 1973). For instance, when talking about managers, bookkeepers or sales persons to an individual who is part of the organizational context, I can be sure that he shares a similar understanding of what these persons do. To develop and change typifications abstraction and language play a crucial role. Only by abstracting from specific individuals who are responsible for recording financial transactions to the general role taking over these responsibilities, and only when giving this role the name "bookkeeping", intersubjectively shared typifications can evolve (Loewenstein, Ocasio, & Jones, 2012, p. 45). Certain socially legitimated actors are thereby able to initiate and lead such change by engaging in discursive acts of theorization. Through developing abstract categories and formulating patterned relationships (Strang & Meyer, 1993), theorization may lead to the development of typified knowledge objects. With regard to new management ideas it can thus be argued that, by being subject to processes of theorization, intersubjective meaning about new management ideas is created within a social context. As a result, these ideas eventually become typified knowledge objects which are part of the social stock of management knowledge. All existing knowledge objects in the organizational context thereby represent the common stock of management knowledge. As such, it is reasonable to argue that, in order to become part of this stock of knowledge, new and existing knowledge objects should be connected through processes of theorization.

On this theoretical basis I am able to approach the question how management knowledge is produced through combining co-existing knowledge objects. I test my theoretical framework using a bibliographical dataset on co-occurrences of 53 modern organizational practices representing typified knowledge objects in academic and business press articles. Based on a qualitative and quantitative analysis of this data, I thereby show that when knowledge objects are combined, the observable combinations are driven by attempts to (1) *leverage* a focal knowledge object by borrowing from co-existing knowledge objects' legitimacy, (2) to *differentiate* a focal knowledge object from co-existing knowledge objects potentially competing for attention or (3) to *embed* a focal knowledge object in the appropriate discourse on related co-existing knowledge objects. In this paper I thus show that combining knowledge objects is a central part of knowledge production processes. I also refine this insight by identifying rules of combination that are observable in theorization processes carried out by producers of academic and business press discourse – two major types of theorizers according to existing literature (Strang & Meyer, 1993; Abrahamson, 1996). As a result I develop a deeper understanding of how management knowledge is produced. By taking the "social construction seriously" (Phillips & Malhotra, 2008, p. 702) and extensively elaborating on the theoretical origins of the concept of theorization, I thereby strengthen the theoretical basis for the major arguments I use in this and the other two papers. As such, the first paper plays a central role in this dissertation.

1.1.2 Antecedents of symbolic adoption: Popular organizational practices on the internet self-representation of the 500 largest firms in Germany

In the second paper I focus on an additional, often underestimated and understudied type of theorizer: the organization (potentially) applying management knowledge which – as indicated above – is often encapsulated in modern organizational practices. While analyzing discourses produced by academics, consultants and other types of actors who are often described as fashion setters or carriers of management knowledge was in the center of most empirical studies on theorization and knowledge creation and expansion (Sahlin-Andersson & Engwall, 2002; Abrahamson & Fairchild, 1999), organizational discourse has received far less attention and investigating how organizations engage in knowledge production through discursive activities has only recently increasingly gained momentum (Phillips, Lawrence, & Hardy, 2004; Fiss & Zajac, 2006). With the proliferation and expansion of management knowledge we have experienced a growing emphasis on self-representation of organizations as a relevant part of management discourse (Sahlin & Wedlin, 2008). The self-representation of organizations thereby takes a double role: First, it is shaped by circulating management ideas about good management and appropriate behavior as captured in modern organizational practices (Scott, 2008; Suchman, 1995). By referencing organizational practices which represent standard criteria for evaluation and description in their self-representation, organizations are able to address existing demands for displaying conformity with beliefs about rationality and progress vis-à-vis their relevant environment (Fiss & Zajac, 2004). As such, organizational self-representations should be “deeply ingrained in, and reflect, widespread understandings of social reality” (Meyer & Rowan, 1977, p. 341). Second, with their self-representation efforts organizations also engage in shaping these beliefs and practices (Sahlin & Wedlin, 2008) by, for instance, combining them in a specific way which may be different from the way practices are combined in discourse produced by other types of theorizers.

Referencing a new or established organizational practice within organizational self-representation can thereby be termed "symbolic adoption" (Westphal & Zajac, 1998). Organizations may thus engage in shaping theorization processes by symbolically adopting organizational practices capturing state-of-the-art management knowledge. Existing empirical studies have thereby mainly focused on investigating potential outcomes of processes of theorization conducted by organizations. Some studies have thereby pointed to positive outcomes for diffusing knowledge objects: Especially when large, centrally positioned organizations (symbolically) adopt organizational practices and forms, the respective knowledge may eventually spread across the field more rapidly (Lieberman & Asaba, 2006; Süß & Kleiner, 2008; Fligstein, 1985; 1990). Other work has emphasized the potentially positive outcomes for the symbolically adopting organizations: In empirical studies it has been found that by symbolically adopting organizational practices capturing beliefs about rational and innovative organizing through referencing these practices within their self-representations, organizations may contribute to enhancing their reputation and legitimacy (Staw & Epstein, 2000) to increasing their value on the stock market (Fiss & Zajac, 2006; Westphal & Zajac, 1998), or to acquiring more resources (Zott & Huy, 2007).

However, despite these potential positive outcomes of self-representation efforts which are in conformance with established management knowledge, a large variety can still be observed across the self-representations of organizations. In my second paper I thus ask: Why do some firms reference modern organizational practices within their self-representation while others do not when such an endeavor seems both inexpensive and effective with respect to social and economic gains? In other words: What are the antecedents of symbolic adoption? Using extensive data on symbolic adoption of 16 modern organizational practices on the Internet self-representations of the 500 largest companies in Germany, I find that three types of antecedents influence the intensity of symbolic adoption efforts of organizations: ownership structure, the degree to which organizations span different social contexts (industries, countries), and their public visibility. My insights on antecedents thereby also point to potential limits of symbolic adoption efforts. Organizations seem to be limited in their possibilities to engage in theorization processes by internal and external characteristics. These insights indicate that although theorizers may shape the knowledge base of other social actors in a specific social context by, for instance, persuading relevant audiences of the superiority of new management ideas by connecting them to very popular ideas from which they may borrow legitimacy, they can only do so within certain boundaries. In their theorizing work, social actors are restricted by the social contexts they are bound to – potentially both in terms of the amount of their theorizing work and its effectiveness. My insights in the second paper thus contribute to deepen the existing understanding of how the social embedment of theorizers themselves affects the way they promote managerial ideas.

1.1.3 Relationship quality or consulting firm features? When medium-sized companies recommend consulting firms

The starting point for the third paper of this dissertation is that – referring to classical diffusion studies – while basic and abstract management knowledge as captured in modern organizational practices is often transmitted through discourse in the media and other indirect channels, final adoption decisions of organizations are often based on information retrieved from business partners or former adopters (Ryan & Gross, 1943; Coleman, Katz, & Menzel, 1966; Rogers, 2003; Scheiber, Wruk, Huppertz, Oberg, & Woywode, 2012). It has thereby been argued that detailed and reliable information is often provided in the form of recommendations from trusted partners (Powell, 1990; Money, Gilly, & Graham, 1998; DiMaggio & Louch, 1998). While a positive relationship between recommendations and a desired outcome – be it the flow of specific knowledge, the adoption of practices and forms or the development of new business contacts – has been proposed and shown in various conceptual and empirical studies (Powell, 1990; Bansal & Voyer, 2000; Gilly, Graham, Wolfinbarger, & Yale, 1998; Zeithaml, Parasuraman, & Berry, 1985), the question on which basis recommendations are made has so far received little attention, especially in empirical research. As in the other two papers which are part of this dissertation, I am thus interested in the process itself, its underlying rules and antecedents, rather than in its outcomes. Based on a survey of medium-sized companies in which their recommendation behavior considering consulting firms was analyzed, I show that the quality, duration, frequency and future intensity of cooperation between consulting firm and medium-sized client are critical when the client decides whether to recommend the consulting firm or not.

I argue that a social actor making a recommendation serves as a go-between (Uzzi, 1996), thereby fulfilling two functions: First, he "transfers expectations of behavior from the existing embedded relationship to the newly matched firms", and, second, he "'calls on' the reciprocity 'owed' [him] by one exchange partner and transfers it to the other" (ibid: 679). In this view, go-betweens make sure that two or more individuals reach a certain degree of agreement on the subjective meaning they attach to actions and situations – in the case at hand, the potential relationship between the recommended consulting firm and the company receiving the recommendation. As such, they contribute to the creation of intersubjective meaning which is the basis for knowledge production. Enabling mutual understanding and social interaction between two or more social actors, go-betweens can thus be regarded as theorizers – although the outcome of their theorization efforts may be rather local and potentially limited to the two other actors involved. Through recommending consulting firms to business partners, go-betweens opens up diffusion channels for consultants. They thus enable and enhance the theorizing work of consultants who can be described as very relevant theorizers in the realm of organizations. Based on these insights I argue that interpretative and cognitive processes are even crucial when taking a more structural view on the spread of knowledge. Generally, diffusion literature can be divided into research investigating sources and structural mechanisms and work focusing on cultural bases for diffusion (Strang & Soule, 1998). In this study I have a setting in which information in the form of recommendations flows within a population based on network relations. This setting might imply to take a view emphasizing the importance of structural mechanisms. Applying the social constructivist conceptualization to this context, however, contributes to bridging existing division between a structural and a cultural view on the spread on management knowledge.

1.1.4 Overall contribution of this dissertation

To conclude, with this dissertation I contribute to existing research by developing a deeper understanding of processes of theorization, their underlying mechanisms and the patterns they follow. I thereby show that combining co-existing knowledge objects is a central aspect of knowledge production and that theorizers follow certain rules when combining knowledge objects. In addition, the insights of this dissertation help us to refine our understanding of the role that organizations play in theorization and knowledge production processes. On this note, I contribute to answering the question how the fact that theorizers are embedded in the very social context, in which they aim to change the existing knowledge base, influences these very efforts. From the insights of this dissertation we also learn more about the cognitive basis for making the decision whether to circulate knowledge via network relations. As such, I add to existing research by linking the cultural/cognitive and the structural view on the spread of information and knowledge.

These various insights add to existing research on the production and spread of management knowledge and thus the development of rational myths both, conceptually, by deepening and refining the theoretical basis of the concept of theorization and, empirically, by applying new methods of data collection in different empirical settings. Taken together, with this dissertation I contribute to develop a deeper understanding for processes of theorization, the role of theorizers and the channels they use. On this basis, it can be better understood why some management ideas only become the next management fashion while others are able to persistently shape the organizational landscape.

2 Theorization as combination: How combining organizational practices in texts contributes to the production of management knowledge

2.1 Introduction

An increasing number of studies within the last years have been able to show that assessing discourses evolving around organizational practices or forms provides us with important explanations for how management knowledge is created, changed and becomes accepted among relevant constituents (Boxenbaum, 2006; Suddaby & Greenwood, 2005; Etzion & Ferraro, 2010; Hirsch P. M., 1986; Green S. E., 2004; Phillips & Oswick, 2012). Conceptually, most of these studies are based on the idea that discourses produced by actors like academics, consultants or so called management gurus play a central role for the creation and establishment of new management knowledge, because they can contribute to create the belief among potential adopters that, despite their dissimilarities, organizations "are similar in ways that would cause them to benefit equally from adopting a management technique" (Abrahamson & Fairchild, 1999, p. 708). Strang and Meyer (1993) have termed the process by which such a belief in the appropriateness and relevance of (management) knowledge is created "theorization". Within the last almost two decades their concept of theorization has become an important conceptual starting point for thinking about how (Green S. E., 2004; Greenwood, Suddaby, & Hinings, 2002), by whom (Sahlin & Wedlin, 2008) and with what consequences (Hirsch & De Soucey, 2006) accepted management knowledge becomes subject to change.

Three basic arguments explicitly or implicitly underlie most existing work in this area: First, language generally and texts more specifically play a crucial role when it comes to the creation and modification of accepted (management) knowledge, because in order to be stored and transmitted on a larger scale, knowledge has to become encoded in some system of signs (Berger & Luckmann, 1966; Phillips, Lawrence, & Hardy, 2004). Second, only few "culturally legitimate" actors – such as scientists, professionals, gurus – actively and effectively take part in creating, modifying and transmitting knowledge within particular social contexts (Strang & Meyer, 1993; Abrahamson, 1996). Third, in order to become accepted, new management knowledge cannot be created on a green field but needs to correspond with existing norms, values and knowledge shared by relevant constituents (Greenwood, Suddaby, & Hinings, 2002; Etzion & Ferraro, 2010). While the first two underlying arguments have been examined in deep detail by studies concentrating on assessing the basic role of language, discourses and rhetoric (Green S. E., 2004; Green, Li, & Nohria, 2009; Greenwood, Suddaby, & Hinings, 2002; Etzion & Ferraro, 2010; Phillips, Lawrence, & Hardy, 2004) and by studies trying to understand the role and interaction patterns of theorizers that participate in creating and perpetuating a market for management knowledge (Abrahamson, 1996; Huczynski, 1993), the third argument has so far received only limited attention. How does new management knowledge become connected the existing stock of established management knowledge?

Previous work that contributes to answering this question has focused on how theorizers connect new or modified management knowledge objects – e.g. single organizational practices or forms – to characteristics of potential adopters (Strang & Meyer, 1993; Kieser A. , 1997) or to dominant norms, logics and values within organizational fields (Etzion & Ferraro, 2010; Greenwood, Suddaby, & Hinings, 2002; Fiss & Zajac, 2006). Nevertheless, single management knowledge objects do not diffuse and cannot be discussed in a vacuum but an important contingency for their "career" is the presence of a whole ecology of other knowledge objects – e.g. in the form of existing organizational practices – that are simultaneously discussed and adopted/rejected by relevant constituents (Abrahamson & Fairchild, 1999). What has so far only been assessed hesitantly in existing research is the question how new management knowledge – e.g. in the form of new organizational practices – becomes connected to this existing stock of shared management knowledge. Put differently, we lack an understanding for how the creation and establishment of new management knowledge is shaped by features of pre-existing management knowledge.

We aim to contribute to answering this question by identifying typical patterns of how theorizers connect new management knowledge objects – namely organizational practices – to existing management knowledge. To do so, we draw on arguments from the sociology of knowledge (Berger & Luckmann, 1966; Schütz, 1967) in order to develop a finer grained understanding of how theorization processes evolve. Based on this literature, we conceptualize theorization of organizational practices as social action which is carried out by specific theorizers who, due to being culturally legitimated, have the principal capacity to change the social stock of knowledge in the organizational context. On this basis we derive three analytically dividable social mechanisms that potentially drive how theorizers connect new and existing organizational practices: We hypothesize that theorizers, when jointly referring to two or more organizational practices, will be driven by attempts to (1) *leverage* the focal practice by borrowing from co-existing practices' legitimacy, (2) to *differentiate* a focal practice from co-existing practices or (3) to *embed* a focal practice in the appropriate discourse on related co-existing practices. We develop testable hypotheses on how these mechanisms of joint theorization should influence patterns of co-occurrence of organizational practices in academic and business press discourse.

We test our theoretical framework using a bibliographical dataset on co-occurrences of 53 organizational practices in academic and business press articles. In total we assess 2,756[1] pairs of practices potentially co-occurring in academic articles and 5,512[2] practice pairs in business press. In order to support our basic proposition that embedment of new knowledge objects into the ecology of existing knowledge objects represents an important and empirically observable phenomenon, we conduct a qualitative content analysis of a sample of 400 texts in which we identified co-occurrences of organizational practices. In the following quantitative analysis we test the above formulated hypotheses on patterns of co-occurrences of organizational practices. Our results provide initial support for our basic theoretical proposition, indicating that an important part of theorization activities is devoted to connecting new knowledge objects – in our case organizational practices – to existing management knowledge. Based on the results of our quantitative analysis, we are furthermore able to uncover basic patterns of how theorizers – in their attempt to promote a focal practice – connect new knowledge objects to the ecology of existing knowledge objects. These results help to understand basic social mechanisms of knowledge (re)combination and by this means provide a basis for

[1] The number of pairs of practice labels per period is (53*52)/2 = 1378. As will be presented later, we consider co-occurrences in two time periods. In total we thus have 1378 *2 = 2756 observations.

[2] To capture discourses in business press, we rely on articles published in trade journals and magazines. We thus have 2756 * 2 (types of media) = 5512 observations in business press.

predicting how the stock of existing management knowledge provides both opportunities and limits for the production and establishment of new management knowledge.

By this means we contribute to two larger streams of research. First, our conceptualization of theorization as social action contributes to research on processes of theorization since it – in contrast to much prior work – aims at understanding how the social embedment of theorizers themselves affects the way they promote their ideas. Furthermore, our empirical results help to refine our understanding of theorization since we are able to show that certain social mechanisms of management knowledge production drive which knowledge objects theorizers combine. We argue that understanding these basic mechanisms of combination is a major premise for understanding how new management knowledge is created and established through theorization, because whether theorizers find the 'right' ways of connecting new knowledge to the stock of existing knowledge will be critical when it comes to reach and persuade a desired audience. Second, the results of our study contribute to existing research that has assessed the functioning of markets for management knowledge – often employing management fashion theory (Abrahamson, 1996). In contrast to prior research, we do not delimit our analysis to specific niches in this market which allows us to detail arguments on endogenous forces operating across niches, thereby triggering success and failure of products – namely organizational practices – in this market. In fact, our results indicate that organizational practices stemming from different niches might exhibit stronger effects on each other's development than existing theoretical arguments would suggest.

2.2 Theory development

2.2.1 The concept of theorization in organizational research

Within organizational research, the concept of theorization has frequently been employed in order to understand how new management knowledge – mostly in the form of new organizational practices or forms – is created, diffuses and becomes accepted by relevant constituents (Strang & Soule, 1998). At the basis of the theorization concept lies the assumption that chances for management knowledge to diffuse and become accepted significantly increase when discourses produced by "culturally legitimate” theorizers such as academics, consultants, management gurus or journalists create the belief among a large number of relevant constituents that they are jointly facing some sort of problem or challenge for which this knowledge – e.g. in the form of an organizational practice – represents the appropriate (standard) solution. Strang and Meyer (1993, p. 492) have defined theorization as the “self-conscious development and specification of abstract categories and the formulation of patterned relationships such as chains of cause and effect.” As this definition indicates, theorization is characterized by two major elements. First, in order to create the belief that a particular standard solution represents the appropriate way of dealing with a particular problem jointly affecting a larger number of dissimilar potential constituents, theorization inherently involves *abstractions* from specificities of single organizations, of effects of particular problems as well as of their potential solutions. Second, theorization involves creating and depicting "*patterned relationships* such as chains of cause and effect” (italics added) between these abstract categories. For instance, effective theorization implies that potential constituents do not only become persuaded that they belong to an abstract category of organizations jointly facing a particular abstract problem, but also that a particular standard solution (and no other standard solution) represents the appropriate solution to that problem.

A number of studies within the last years have explicitly or implicitly used the concept of theorization as a means to explain the establishment and diffusion of particular organizational practices or forms. Greenwood et al. (2002, p. 72) find that the establishment of multidisciplinary partnerships among the ‘Big Five’ accounting firms was facilitated by professionals theorizing a problem that was, across a time period of 20 years, “insistently specified and generalized as affecting all firms and members of the profession”. In a similar study on accounting firms, Suddaby and Greenwood (2005) find that proponents of the new organizational form of multidisciplinary partnerships successfully used theorizations which emphasized the long-standing relationships between law and accounting firms by pointing to similarities in established norms and values held within the two categories of firms. Green et al. (2009) demonstrate how the Total Quality Management movement among U.S. firms in the late 1970s and 1980s was reinforced by skillful theorizers promoting this practice. They demonstrate how these “TQM entrepreneurs” created the belief that the material decline of a large number of dissimilar

U.S. firms in the 1970s was rooted in a joint abstract problem – namely, low quality – and that the 'standard solution' (TQM) for this problem was to be found among firms from Japan. In fact, as the authors emphasize, a number of other reasons for the economic downturn among U.S. firms besides quality were discussed at that time (e.g. overregulation) which would have called for other standard solutions. Nevertheless, the skillful creation of a cause and effect relationship between two problems (material decline and quality) and a solution (TQM) lead to the diffusion of one standard cure. A recent study by Etzion and Ferraro (2010) demonstrates how variations in theorizations articulated by proponents of the Global Reporting Initiative (GRI) helped to relate this practice to established financial reporting practices, making clear that the new practice was suitable for a larger number of dissimilar organizations. The authors show that, by displaying both similarities and dissimilarities between the new GRI practice and financial reporting practices, theorizing actors were able to guarantee both a certain fit with established management knowledge and to emphasize idiosyncratic features of the new practice they were trying to establish. Etzion and Ferraro (2010, p. 1093) thereby come to the result that "comparison and analogy are prevalent mechanisms in discursive strategies that institutional entrepreneurs"– or, theorizers – use.

Taken together, existing research has addressed several aspects of theorization: First, it has been investigated, how a belief in similarities between dissimilar organizations can been created in order to argue that focal practice can be adopted by all of these organizations. Second, authors have focused on how the belief is created that a focal practice represents the appropriate solution for a relevant problem. Third, recent studies point to the question of how the belief is created that a focal practice can be connected to a predominant practice and is thus compatible with capturing prevailing norms and values. As this summary indicates, what all of these studies have in common is that they focus on how a belief in the applicability and appropriateness of new (management) knowledge is created, thereby pointing to the importance of investigating the *use of rhetoric*. These studies are thereby often based on the idea that analogical reasoning is central for creating a belief and thus changing existing knowledge in the organizational context (Oswick, Keenoy, & Grant, 2000; Tsoukas, 1993). A second commonality of most of these studies is that they concentrate on understanding theorization of *single organizational practices* or forms in specific organizational fields.

Although these studies have by this means substantially broadened our understanding for the role of theorization in processes of knowledge production and diffusion, important questions remain unanswered. Work from management fashion theory reminds us that at each point in time, *multiple* organizational practices and thus knowledge objects compete for attention among constituents such as practitioners, professional associations, consultants, academics, journalists etc. (Kieser, 1997; Abrahamson, 1996). Thus, single knowledge objects such as organizational practices do not diffuse and are not theorized in a vacuum but an important contingency for their “career” is the presence of a whole ecology of other management ideas, simultaneously used, discussed and adopted or rejected by relevant constituents (Abrahamson & Fairchild, 1999). In their attempt to formulate compelling “patterned relationships such as chains of cause and effect”, theorizers will not be able to ignore these other – potentially conflicting, complementary, competing – co-existing ideas. As pointed out above, promoting a standard solution requires, for instance, explaining how the focal solution relates to (e.g. is superior to) other co-existing standard solutions. In view of existing research, the question remains largely unanswered as to how and to what extent this fact influences the act of theorizing and thus knowledge production and establishment itself. The goal of this study is to contribute to answering this question.

The focus of our study slightly differs from the studies we have mentioned so far in at least two aspects. First, we partly deviate from existing research which has mostly treated theorization as the independent variable in order to explain its outcomes such as diffusion (Green, Li, & Nohria, 2009), prevalence (Etzion & Ferraro, 2010) or legitimacy (Greenwood, Suddaby, & Hinings, 2002) of new management knowledge. In contrast to prior research, our main interest lies in explaining theorization and thus the production and establishment of management knowledge itself. Second, in contrast to prior research (Green S. E., 2004; Suddaby & Greenwood, 2005), we are to a lesser extent interested in explaining rhetorical features of theorization. Instead, we aim to gain deeper insights into social mechanisms that drive and shape theorization processes – especially with respect to the way theorizers relate the focal knowledge objects (organizational practices) they discuss to the ecology of other, co-existing knowledge objects.

In order to reach this goal, we develop a theoretical framework which comprises four central elements: First, we use basic arguments from the sociology of knowledge (Berger & Luckmann, 1966) in order to conceptualize theorization as social action. Transferring this conceptualization to the organizational context, we identify certain classes of actors (e.g. academics) that function as important theorizers in this specific social context. Building on these arguments, we conceptualize labeled organizational practices as central knowledge objects which these theorizers as social actors can draw on. Finally, this framework allows us to develop testable hypotheses on how theorizers might make use of the ecology of co-existing organizational practices when theorizing a focal practice. In the following sections, we outline this theoretical framework in greater detail.

2.2.2 Theorization as social action

Referring to classical social constructivist literature which aims at describing and understating structures and processes of the life world (Berger & Luckmann, 1966; Schütz & Luckmann, 1973), we start with deriving basic theoretical constructs which are needed to create knowledge and by this means to construct reality: we describe subjective and intersubjective meaning, elaborate on the development and change of typifications and knowledge objects, and, on the basis of these explanations, we conceptualize theorization as social action. We then argue how these insights from the life world can be transferred to the organizational context and thereby especially point to relevant social actors in the organizational context who function as theorizers and knowledge objects which are subject to theorization.

Subjective and intersubjective meaning and knowledge

Explaining social action requires analyzing and interpreting the subjective meaning individuals assign to their actions (Weber, 1978). In this view, individual action is seen as subjectively meaningful, because – in contrast to behavior – it always involves intentionality and thus a motive. Meaning is thereby understood as subjective insofar as it results from the idiosyncratic experiences of single individuals. Through experience, individuals gain subjective knowledge, the “certainty that phenomena are real and that they possess specific characteristics” (Berger & Luckmann, 1966, p. 1). Experience becomes – at least partly – stored in an individual’s subjective stock of knowledge which provides one basis for subjectively meaningful behavior.

However, as social beings, individuals are always confronted with actions of others and, respectively, with subjective meaning that is attached to these actions by other individuals. As a result, subjective meaning is informed by and oriented towards others (Weber, 1978). In order to make mutual understanding and social interaction possible, it is necessary that two or more individuals reach a certain degree of agreement on the subjective meanings they attach to actions. Such an agreement in interpersonal relationships has been described as intersubjectivity, "the sharing of subjective states by two or more individuals" (Scheff, 2005). Whether in face-to-face contact or other forms of interaction such as indirect communication through texts, intersubjectivity means that two or more individuals are able to agree on significant parts of the meanings they attach to an action and thus share a definition of that action (Hasselbladh & Kallinikos, 2000). When, for instance, writing a letter, an author is able to take the perspective of the specific addressee, knowing that, in the subjective meaning they attach to the situation, both individuals agree to a certain extent. To do so, an author makes assumptions about the reader’s knowledge base and how it relates to or differs from his own knowledge base. Taken together, Intersubjectivity describes the ability of individuals to “hold simultaneously to one’s own and to another’s viewpoint” (Emirbayer & Mische, 1998, p. 968).

Intersubjective meaning and knowledge through typifications

Intersubjectively shared and agreed upon meaning of two or more individuals is possible, because individuals work with reciprocal typifications of actors, actions and situations (Schütz, 1967; Schütz & Luckmann, 1973). Whether the action of giving a handshake when becoming acquainted or choosing a particular form of address when writing a letter, we use typifications of actors (e.g. unacquainted business partner, friend), actions (e.g. handshake, “high five”, “Dear”, “Hi”) and situations (e.g. business meeting, party) of which we are – more or less – certain that we share them with our counterpart(s). The sum of these typifications constitutes the social stock of knowledge that individuals draw on when creating subjective meaning (Schütz & Luckmann, 1973; Meyer R. , 2008). Such typifications are relatively stable and are passed on over generations, thereby achieving a status of quasi objectivity (taken-for-grantedness), because the initial rationales (e.g. why do managers wear ties?) underlying them have been left out when they were passed on by prior to subsequent generations (Berger & Luckmann, 1966). On the level of particular social contexts, the social stock of knowledge that is made up of such relatively stable patterns of typifications “delineates the boundaries and the ‘horizon’ within which people can meaningfully act – and beyond which it is impossible to see or to understand” (Meyer R. , 2008, p. 521).

How do reciprocal typifications change?

Although relatively stable, patterns of reciprocal typfications subjects acquire through socialization are neither ‘naturally’ given nor constant. Instead, they have been created and perpetuated by social actors and are subject to (gradual) changes initiated by those actors (Berger & Luckmann, 1966; Greenwood, Suddaby, & Hinings, 2002). In order to understand how reciprocal typfications may become subject to change, it is helpful to think about two of their core characteristics:

1. The development of reciprocal typifications of actors, actions and situations involves a certain degree of *abstraction* from individual experience and cognition (McKinney, 1969). For example, the typified actor “postman” – a person distributing letters on behalf of an authorized organization – represents an abstraction from an individual postman as for being typified as a “postman” certain characteristics such as gender, age, origin etc. are irrelevant. The typified action “cooking” – preparing a meal – abstracts from single events of cooking since, in order to be labeled as “cooking”, it is irrelevant whether an individual prepares pasta or steaks, lunch or dinner, uses a pan or a jar.
2. However, abstraction alone only leads to the development of individual typfications on the cognitive level. In order to make reciprocal typifications of actors, actions, and situations and thus intersubjectively shared meaning and knowledge possible, this abstract knowledge needs to be transferrable between subjects. *Language* has been described as representing the central sign system which enables the development of *such reciprocal* and thus transferrable

typifications through communication (Berger & Luckmann, 1966; Luckmann, 2006; Phillips & Oswick, 2012).

On the one hand, language can be used to describe and store abstract knowledge about typical features of typical actors, actions and situations. By consulting a dictionary, we are able to recall typical features of the act of "cooking" and by consulting the "Knigge" we might be able to partly compensate for knowledge on typical (and thus appropriate) actions in typical social situations that we did not acquire through socialization (e.g. "how to behave at a dinner"). As these examples indicate, especially written language – text – plays a crucial role for the development and enactment of typifications, since "it is primarily through texts that information about actions is widely distributed and comes to influence the actions of others" (Phillips, Lawrence, & Hardy, 2004; Heracleous & Barrett, 2001).

On the other hand, language allows us to label abstract categories and thus typifications of actors, actions and situations. Labels such as "business partner", "handshake" or "business meeting" are single words or combinations of words (other examples are "strategic alliance or Chief Executive Officer" (Loewenstein, Ocasio, & Jones, 2012, p. 45) that denote reciprocal typifications and by this means encapsulate abstract, intersubjectively shared meaning and knowledge in language. Language thus represents the central instrument for the transmission of typifications as well as the central 'reservoir' (Meyer R. , 2008) in which reciprocal typifications become sedimented and through which they are denoted with labels.

These two central features of typifications just described – abstraction and sedimentation in language – help to understand how typifications may become subject to change. First, they clarify that creating new reciprocal typifications requires the development of abstractions (from particular actors, actions, situations) (McKinney, 1969). Second, they make clear that language is necessary in order to change reciprocal typifications, because language represents the central sign system through which typifications can be transferred and mediated between subjects (Heracleous & Barrett, 2001; Fairclough, 1994). Third, they point to the fact that most typifications are denoted by recurrent labels – words or combinations of words that encapsulate intersubjectively shared meaning and knowledge –

and that changing typifications requires infusing new or existing labels with new or modified intersubjectively shared meaning and knowledge (Loewenstein, Ocasio, & Jones, 2012).

Theorization as social action

Based on the arguments just developed, theorization can be conceptualized as social action: Theorization as an action is subjectively meaningful since theorizers are bound to their individual knowledge base which has, in turn, been informed by a social stock of knowledge through experience and socialization. In theorizing acts, theorizers draw on an overlap of their own knowledge base and the anticipated knowledge base of their audiences – a common social stock of knowledge – while at the same time aiming at (at least gradually) modifying this social stock of knowledge by contributing to develop and change reciprocal typifications of actors, actions and situations. In order to reach this goal, theorizers have to make use of a sign system they share with their audience – mostly language – as they intend to modify, create, denote ('label') and transmit abstract knowledge.

In the following sections, we will transfer this conceptualization to an organizational context. We thereby aim to answer three central questions: Who are actors that take the role of theorizers in the organizational context? What are central typified knowledge objects these theorizers promote and draw on? What are social mechanisms that help to explain how theorizers combine new and existing knowledge objects when trying to modify a social stock of knowledge?

2.2.3 Theorization in the organizational context

Theorizers in the realm of management

While questioning, changing and perpetuating typifications is part of everyday life, "only a very limited group of people in any society engages in theorizing, in the business of 'ideas'" (Berger & Luckmann, 1966, p. 15). Who these *theorizers* are thereby differs across social contexts, but what they have in common is that they are "culturally legitimated" (Strang & Meyer, 1993, p. 494) in the respective social context and may thus, through processes of theorization, influence the socialization of members of the social context. Identifying relevant theorizers within a specific social context thus requires understanding how members of this social context are socialized. Since the focus of this paper lies in explaining theorization within an organizational context – or, more specifically, in explaining how theorizers in this context contribute to the development and modification of management knowledge – the next sections are dedicated towards identifying theorizers that potentially influence the socialization of managers as the central subjects within this context.

Within the organizational context, socialization of managers primarily occurs, first, through professional education and training at universities and business schools, which to a large extent takes place before becoming member of an organization, and, second, in organizations they have been working in during their careers (Schein, 1968). In their management education, managers acquire “bodies of knowledge which are governed by general principles which are applicable to a wide variety of situations” (Schein, 1968, p. 12). They are socialized in what are accepted business practices and what are not (Palmer, Jennings, & Zhou, 1993). As such, "universities and professional training institutions are important centers for the development of organizational norms among professional managers and their staff" (DiMaggio & Powell, 1983, p. 152). Existing studies provide empirical evidence for the importance of professional education for the socialization of managers and its consequences for decision-making. In their study on the adoption of the multidimensional form, Palmer et al. (1993, p. 107) show that organizations were significantly more likely to adopt that new organizational form when managed by CEOs with an education at one of the leading business schools where the concept has “permeated management thinking”. On a similar vein, Fiss and Zajac (2004) find support for their expectation that CEOs’ educational background in economics and law enhances the chance of adopting the shareholder value orientation. Since the concept of shareholder value management originated from these two fields in which the firm has traditionally been regarded as a “profit-maximizing function”, CEOs who have been socialized in these fields during their professional education were more likely to embrace the knowledge captured in this contested practice.

As these findings indicate, the social stock of knowledge shared by managers of organizations is strongly influenced by the professional (management) education they have experienced. In addition, socialization also occurs "on the job" (DiMaggio & Powell, 1983, p. 153) in “trade association workshops, in-service educational programs, consultant arrangements, employer-professional school networks, and in the pages of trade magazines". The concept of organizational socialization thereby describes the process by which organizational members learn and internalize “values, norms and behavior patterns” (Schein, 1968) of the organization which involve – among others – major goals of the organization and the preferred means to achieve these goals. Taken together, two major arenas can be identified in which managers are socialized: at universities and business schools during their professional education and in the organizations they have been working in during their career.

Arenas of socialization can thereby be described as areas in which a common social stock of knowledge is produced and reproduced – and changed by actors involved in theorization processes. With regard to the relevant arenas of socialization of managers, two major classes of theorizers have been identified that contribute to maintaining and changing the social stock of knowledge managers acquire through socialization. Academics, through publishing (scientific) work that is used in management education at universities and business schools, represent important theorizers in the organizational context and thus substantially contribute to socializing managers (Palmer, Jennings, & Zhou, 1993; DiMaggio & Powell, 1983). A second prominent class of theorizers is producers of business media discourse – such as management gurus, professionals, consultants and partly also academics (Kieser A. , 1997; Clark, 1995; Huczynski, 1993). Business media function as an important gatekeeper in the diffusion of management knowledge (Hirsch P. M., 1986; Hirsch & De Soucey, 2006) and as a key source of information shaping managerial decision making (Burns & Wholey, 1993; Deephouse & Heugens, 2009; Sahlin & Wedlin, 2008). As, for instance, Hirsch and De Soucey (2006, p. 178) show, the spread of the practice ‘organizational restructuring’ was enabled by business media discourse in which the term was described as a “way to talk legitimately about squeezing efficiency out of the same set of assets within organizational limits”. Through these processes of theorization conducted by producers of business media discourse, organizational restructuring became part of the existing "managerial ideology” (ibid: 181) – the shared stock of managerial knowledge.

The dominance of academics and producers of mass media discourse as major theorizers shaping managerial socialization has been described in established models on the diffusion of management knowledge (Strang & Soule, 1998). It has thereby also been shown that discourses produced by these two classes of theorizers are not detached from each other but that theorizers may influence each others’ way of theorizing. For instance, Barely, Meyer and Gash (1988) over time observe a certain convergence in how the concept “corporate culture” was viewed in academic and business media discourse.

Organizational practices as typified knowledge objects

As described above, managers acquire significant parts of their social stock of knowledge through socialization taking place during professional (management) education and on-the-job socialization (Schein, 1968). The relevant stock of knowledge managers acquire thereby includes abstract knowledge about typical organizational goals (e.g. 'we want to offer the best-quality products at affordable prices'), typical organizational problems that mostly become obvious when comparing the organization's goals with its current situation (e.g. 'we have high variance in product quality', 'our production costs are too high'), typical solutions for addressing and potentially resolving these problems (e.g. 'introduce quality control after every process step') and typical tasks and roles resulting from these solutions (e.g. 'every worker is responsible for delivering high quality to the subsequent working station'). Taken together, a major part of managerial knowledge consists of reciprocal typifications allowing managers to formulate and establish accepted organizational goals and accepted means to achieve these goals (Meyer & Rowan, 1977). As existing research shows, these typifications are often encapsulated in popular organizational practices – often also termed “management fashions” (Abrahamson & Fairchild, 1999) – such as Corporate Culture, Shareholder Value Management, Knowledge Management or – referring to the examples in brackets in this paragraph – Total Quality Management.

It has been argued that such popular organizational practices are characterized by the two central features of typified knowledge objects that we have outlined above: First, these organizational practices provide *abstract* knowledge on how typical organizations can resolve typical problems by applying typical solutions. Popular examples of practices representing such typified management knowledge include Lean Management – providing abstract knowledge in the form of tools and ideas for restructuring the value chain aiming at waste reduction in order to solve the organizational problem of inefficiencies (Womack, Jones, & Roos, 1990) – Six Sigma – providing methods for statistically analyzing quality conformance and tools for implementing quality assurance in organizations aiming to achieve a stable and high quality (Eckes, 2001) – or Shareholder Value Management – providing rules for collecting financial data used to make (investment) decisions that lead to the creation of shareholder value (Rappaport, 1986). Second, popular organizational practices are also characterized by a recognizable *label* that captures this knowledge. As Abrahamson and Fairchild (Abrahamson & Fairchild, 1999) note, such practices are characterized by the fact that they have recognizable "labels that denote particular management techniques and specify important organizational goals and the means of attaining them most efficiently by using these techniques". In this view, popular organizational practices can be seen as typified and thus 'ready-made' "labeled cultural categories for thought and action" (Loewenstein, Ocasio, & Jones, 2012, p. 63). These recognizable labels allow theorizers to transport or 'carry' (Sahlin & Wedlin, 2008) abstract management knowledge between members of a social context while at the same time helping them to change existing or develop new reciprocal typifications (Kieser A. , 1997).

However, as we have outlined above, changing reciprocal typifications cannot be achieved independently but can only take place against the background of the shared social stock of knowledge of theorizers and their audiences. In fact, when aiming to change or develop knowledge objects, theorizers are forced to draw on other, co-existing typified knowledge objects, as they constitute the cornerstones delimiting the space in which both theorizers and their audiences are able to think and understand (Meyer R. , 2008). In the organizational context, the sum of co-existing organizational practices constitutes a major part of the social stock of management knowledge – besides, for instance, industry-specific and expert knowledge (e.g. knowledge about the market for chemicals and expertise in chemistry when managing a chemical company). When aiming to change or modify the social stock of knowledge within a social context, theorizers are thus highly dependent on embedding the focal knowledge object they promote into the ecology of co-existing organizational practices. One possibility for theorizers to achieve such an embedment is to link a focal practice to other practices in the texts – e.g. academic articles, business press articles – they produce. Investigating how labels of popular organizational practices are combined in such texts thus contributes to understanding patterns underlying the creation and modification of the social stock of relevant management knowledge. In order to do so, we devote the following sections to developing testable hypotheses on which knowledge objects – i.e. labels of popular organizational practices – theorizers will combine in their attempt to promote a focal knowledge object and by this means change or modify the existing social stock of management knowledge.

2.2.4 Hypotheses development: Mechanisms driving combinations of practices

In this study we aim to explain patterns underlying the combination of organizational practices in texts. Explaining patterns thereby involves two major elements: First, the precondition for explaining patterns is that patterns can be identified. We thus aim to find typical combinations of practices or - in other words - to ask which pairs of practices are combined in texts more often than others. Second, explaining patterns involves developing an understanding of the social mechanisms driving the observable patterns of combination. Understanding these mechanisms contributes to answering the question why certain pairs of practices are combined more often than others. To think of relevant social mechanisms one can take the perspective of a promoter of a focal practice: When theorizing a focal practice, how can the fact that other organizational practices co-exist enhance or impede theorization of the focal practice. On this basis, in the following we thus develop testable hypotheses on three analytically dividable *social mechanisms* processes of theorization should be driven by when considering the whole ecology of co-existing practices – namely *leverage, differentiation and embedment*. We then propose two elements increasing the complexity of explaining theorization processes. First, in accordance with Abrahamson and Fairchild's (1999) concept of 'fashion niches' we argue that *concept groups represent relevant reference points* when it comes to processes of theorization. Second, as theorization processes take place in *different social contexts* which represent different meaning systems, we expect that theorization processes should differ across contexts.

<u>Leverage</u>

Theorization aims at providing organizational practices with legitimacy, the generalized perception that a practice is "desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions" (Suchman, 1995, p. 574). Only on this basis, an upcoming organizational practice can become part of the social stock of typified management knowledge. Already early work within institutional theory has argued that legitimate social objects such as organizational practices, products or firms are frequently used by proponents of less legitimate objects in order to reach a "contagion of legitimacy" (Zucker, 1987, p. 446). As has convincingly been shown, the establishment of rhetorical linkages between new social objects to legitimate existing objects contributes to the acquisition of legitimacy of the new object because evaluators (e.g. investors, potential adopters) frequently rely on heuristics when evaluating new phenomena (Lee & Paruchuri, 2008; Kennedy, 2008; Etzion & Ferraro, 2010). Lee and Paruchuri (2008) demonstrate that firms enter new and emergent product markets faster when the volume and positive tenor of rhetoric in media discourses increases which associates the new market to established and legitimate product markets. With respect to the diffusion and legitimation of organizational practices, Etzion and Ferraro (2010) show that the Global Reporting Initiative (GRI) was legitimated by the fact that its proponents created rhetorical linkages to existing and legitimate practices of financial reporting.

Creating linkages to already established practices – and thus existing typified knowledge objects – seems to be a common strategy among theorizers who attempt to promote a focal practice. In the following, we will refer to the mechanism underlying the creation of such linkages as a *leveraging mechanism*. Based on these arguments and findings, we propose that actors involved in producing discourses about an upcoming, focal practice will be driven by a leveraging mechanism and will thus tend to link that practice to more legitimate practices rather than to practices with a similar level of legitimacy. We thus expect the following:

> *Hypothesis 1: The higher the popularity difference between two organizational practices, the more often the two practices are combined in texts.*

Differentiation

It has been argued that theorization efforts can only be effective when they are conducted by "culturally legitimate" actors such as scientists, intellectuals or professionals and are perceived by relevant audiences (Strang & Meyer, 1993). The attention of these theorizers and the capacity of established discursive channels (e.g. academic articles, academic conferences, or business press articles) thereby represent limited resources which drive a competition between practices in the run for becoming typified knowledge objects (Hilgartner & Bosk, 1988). Competition between organizational practices is further caused by the limited implementation resources of organizations. For theorization this means that "diffusion occurs only if new ideas are compellingly presented as more appropriate than existing practices" (Greenwood, Suddaby, & Hinings, 2002, p. 60). Following this market-related argument of competition between co-existing practices, producers of discourses on organizational practices should thus be driven by an attempt to explicitly *differentiate* a focal practice from other practices that compete for a limited amount of attention and resources. We thus propose that theorization processes will be driven by a second mechanism - namely *differentiation*.

Generally, competition represents a temporal construct – often implicitly or rather incidental. In their theoretical model on how social problems "rise and fall", Hilgartner and Bosk (1988, p. 56) argue that "carrying capacities" of the "institutional arenas that serve as 'environments' where social problems compete for attention and grow" are limited at each point in time, thus leading to competition between social problems emerging at that point in time. We argue that this also holds for management practices. Based on these findings, we would suggest that from the perspective of theorizers one basic way of identifying potential "competitors" of a focal practice is to consider practices that are emerging and/or popular at the same point in time as the focal practice. We thus propose that practices of about the same age should function as reference points for differentiation:

> *Hypothesis 2: The higher the age difference between two organizational practices, the less often the two practices are combined in texts.*

Embedment

Besides attempts to leverage a focal practice by referring to more legitimated practices and the intent to differentiate a practice from competing practices, theorizers drawing on the ecology of co-existing practices as the relevant part of the social stock of knowledge should be driven by a third social mechanism. Abrahamson and Fairchild (1999) suggest that at each point in time, several management practices co-exist that address the same or similar areas of organizational activity and thus related organizational problems. These areas or ‘management fashion niches’ represent “recurrent sources of demand for new discourse promoting fashionable management techniques for rationally managing particular types of organizational components”. This argument suggests that the market for discourses promoting organizational practices is to some extent structured around areas of organizational activity. Related to this, Fairclough (2005, p. 933) argues that discourses “are often organized around a dominant ‘nodal discourse’ (the discourse of ‘new public management’, or ‘quality management’ might be examples) which organizes relations between other constituent discourses”.

For theorization this means that promoting a focal practice involves an *embedment* of this practice within one or more appropriate nodal discourses. When, for instance, theorizing a strategy practice, it will make sense to refer to existing practices and discourses in the realm of strategic management (e.g. by referring to agile strategies) instead of embedding the practice within the niche of human resource management practices (e.g. by referring to management by objectives). We would thus expect that theorizers will rather jointly discuss two practices from the same area of organizational activity than two practices from different areas of organizational activity:

> *Hypothesis 2: Practices are combined in texts more often with other organizational practices of the same niche than with practices of a very different niche.*

2.2.5 Hypotheses development: Variations within and across niches of practices

We expect that both the leverage and differentiation mechanism outlined above should vary in strength between practices from the same niche and practices from different niches. Considering the leverage mechanism, in the realm of organization studies it has been shown that less established organizations can borrow from the legitimacy of more established organizations from the same population or from the population as a whole (Kuilman & Li, 2009; Dobrev, Ozdemir, & Teo, 2006; Hannan, Carroll, Dundon, & Torres, 1995; Ruef M. , 2000). Transferring this argument to our study's context, we expect leverage effects to be stronger for practices from the same area of organizational activity than for practices from different areas. When – for instance – aiming to leverage an upcoming practice such as Blue Ocean Strategy, it might be valuable to display similarities with a practice such as Core Competences, which is more established and also contributing to support strategy development addresses the same area of activity. Taking another example, an upcoming marketing practice is more likely to gain legitimacy from other, more established marketing practices, representing a more relevant point of reference than practices belonging to different groups. Accordingly, there is empirical evidence showing that the established practice of Quality Circles has lead the way for other employee- and quality-related practices in discourses and managerial praxis (Dean & Bowen, 1994). We thus refine the above proposition 1:

> *Hypothesis 4: Leverage efforts should be stronger for organizational practices from the same niche than for practices from different niches.*

Practices from the same niche may also serve as especially relevant reference points when it comes to competition among practices emerging at roughly the same time period. Despite the limited amount of attention from theorizers and implementation resources in organizations, two practices emerging at the same point in time but addressing different organizational problems may both be able to prevail. In contrast, we argue, since practices belonging to the same niche provide to some extent alternative pathways to solving the same organizational problems, there is a lower chance that both are discussed, adopted and diffused in the long run. For instance, as Abrahamson and Fairchild (1999) emphasize, Total Quality Management might be replaced by another process oriented practice like Business Process Reengineering but not by a practice like Joint Ventures. When promoting a new HR-practice such as Pay for Performance, it might thus be reasonable to *differentiate* it from other practices shaping human motivation and leadership, such as Management by Objectives. Accordingly, competition and thus attempts of differentiation between practices from the same niche should be more intense than between practices from different niches. We thus expect:

> *P5: Differentiation efforts should be stronger between practices from the same concept niche than between practices from different niches.*

2.2.6 Hypotheses development: Variations across different social contexts

Above we have identified social mechanisms driving the co-occurrences of practices in texts as theorizing acts. So far, we have not distinguished between different types of texts and the social contexts in which they are produced. However, although we assume that the social processes involved in the production of discourses on management practices may principally span different social contexts, we would argue that the patterns of theorization will systematically differ across contexts actively involved in the production of discourses on management practices since the "what counts as knowledge and truth – and what does not" (Meyer R. , 2008, p. 522) is defined by each "spatially and historically embedded field" and may thus differ across fields or contexts. In the context of management practices, academia and the business press have been identified as the two social contexts which are mainly involved in producing discourses and participating in theorization processes (Strang & Meyer, 1993; Barley, Meyer, & Gash, 1988; Abrahamson, 1991). Existing studies thereby indicate that discourses on management practices differ across various social contexts since they are bound to diverging context specific logics (Zilber, 2006). Being socialized in different contexts, producers of discourses in these contexts draw on different social stock of knowledge when discussing management practices (Astley & Zammuto, 1992). Related to this, Thomas (2003) investigates the discourse on the concept of Competitive Advantage – as introduced by Michael Porter – in different contexts. He criticizes that different areas of activities involved in the processes of discourse production and practice diffusion – academia, consultancy, managerial praxis – are mostly homogenized, neglecting the respective social contexts of different theorizers which may strongly differ.

In order to develop detailing expectations regarding patterns of theorization in different contexts we start by describing the two relevant contexts in some detail. We thereby define social contexts based on two characteristics. First, depending on the type of social actors predominantly constructing the discourse in this context as well as the audiences that are mainly addressed, different social contexts fulfill different *societal missions* (Dean & Bowen, 1994). Second, in each social context discourse on management practices predominantly takes place in one *type of media* while one major communicative genre can be identified. In order to develop testable propositions, we continue by developing ideal-type assumptions concerning the characteristics the two contexts – academia and business press – should be driven by. We do not expect to find discourse structures that exactly resemble these ideal types but, over a large sample of texts produced within these two contexts, we expect these assumptions to contribute to explaining differences (Barley, Meyer, & Gash, 1988).

Academic context

Since researchers gain legitimacy and reputation in large part from other researchers, the academia itself represents its own, most important audience and authority (Kieser & Leiner, 2009; DiMaggio & Powell, 1983). Legitimacy and reputation are thereby achieved when academics are able to balance between differentiation or uniqueness of their own research and connectedness to the dominant academic discussion in their field of research. Thus, in order to be successful, academic innovations "have to be different and novel at the same time as being oriented to the work of colleagues and capable of being used by them for their own research. They therefore combine novelty with collective acceptability (Whitley, 1984, p. 778)." This tension indicates that the major *societal mission* of the academic context is to contribute to the creation of new but recognizable knowledge, whether through engaging in "intellectual inquiry for its own sake" (Bok, 1990, p. 9) or in a more instrumental practitioner oriented sense (Whitley, 1984).

As indicated above, this newly created knowledge thereby has to be accepted within a specific, more or less narrowly defined field of research (DiMaggio & Powell, 1983). Research is thus led by an idea of content based differentiation, meaning that there exist various specialized research disciplines – within the domain of management studies partly in accordance with organizational functions – resulting in academic specialists in areas like human resource management, marketing, operations etc. As a result, "management theory as a field is multidisciplinary, but individual theories and articles tend to be discipline bound" (Dean & Bowen, 1994, p. 397). On this note, academic journals – typically peer-reviewed by other researchers and with an international academic audience – representing the major *type of media* in this context, are often produced by and address one of these disciplines (e.g. *Journal of Marketing* is mainly written and read by marketing researchers).

Based on these arguments, we expect that when authors of academic papers connect a focal practice to other co-existing practices, this theorizing act should be driven by the idea to create new but recognizable knowledge *within a specific discipline* or research domain. As a result, we would propose that joint theorization in academia is strongly driven by the *embedment* mechanism outlined above. Conversely, since academic articles "may need no clear relevance for management" (Barley S. R., 2006, p. 17) and "management theory [...] is concerned with understanding, not just improving, organizations" (Dean & Bowen, 1994, p. 397)**,** we would propose that advertising and marketing a focal organizational practice by *leveraging* its legitimacy and emphasizing its uniqueness compared to other practices (*differentiation*) should not constitute the major objective of authors in academia when linking two or more practices. We thus expect:

> *Hypothesis 6: Organizational practice combinations in the academic context will mainly be driven by the embedment mechanism, while leverage and differentiation will be of minor importance.*

Business press context

The business press context has been described as translating and recombining ideas from organizational praxis and academia, making them accessible to a larger number of heterogeneous audiences (Abrahamson, 1996). Representing "carriers" (Sahlin & Wedlin, 2008) of typified management knowledge that may have the capacity to "block" or "facilitate" knowledge diffusion at their "strategic checkpoint" (Hirsch P. M., 1972, p. 649), it has been argued that the business press is of key importance when it comes to the dissemination of knowledge on management practices. Hence, the predominant *societal mission* of the business press context is that of knowledge transfer and re-production. Thereby, business press journals and magazines – representing the major *type of media* in this context – are commercially oriented and market-driven, meaning that those ideas and practices are discussed and promoted that are fashionable and for which there is a perceived demand of their addressees: "the discourse that is produced in this conjuncture must be able to compete effectively against alternative discursive products but also leave room for future 'products' by containing the seeds of its own obsolescence" (Thomas, 2003, p. 788). Following the societal mission and the dominant market-driven publishing logic, we expect that when a focal management practice is linked to other practices this is mainly driven by the attempt to promote and advertise the focal practice. As a result, we expect that theorization processes are strongly driven by the *leverage* and the *differentiation* mechanisms.

One major type of audiences addressed by business press journals and magazines are thereby managers. They read business press articles in order to get an impression of current developments in their industry or in business in general, often without limiting their attention to one specific domain or discipline. As for example Dean and Bowen (1994, p. 396) show, in contrast to academic articles, business press articles on Total Quality (Management) were “inherently cross-functional”, making it “not unusual to find references to marketing, product design, operations, and human resource management” in one single article on Total Quality. As a result, different functional areas of management and organization and thus a larger heterogeneity of potentially weakly related organizational problems can be addressed within one and the same article (Dean & Bowen, 1994). Business press articles are thus, in sharp contrast to academic articles, evaluated mainly based on the perceived relevance of the subject matter itself. These findings indicate that when practices are jointly discussed, this theorizing act is *not* mainly driven by an attempt to *embed* a focal practice in a specific niche. Taken together the above arguments suggest:

> *Hypothesis 7: Organizational practice combinations in the business press context will be mainly driven by the leverage and the differentiation mechanism, while the embedment mechanism will be of minor importance.*

2.3 Approach, data and methods

The aim of this study is to explain how theorizers embed knowledge objects they promote into the ecology of co-existing knowledge objects in their attempt to contribute to the modification of an existing stock of management knowledge. We are thereby interested in popular organizational practices as knowledge objects representing a central part of management knowledge. To do so, we aim to investigate *which* labels denoting particular organizational practices are typically combined (co-occur) in texts produced by theorizers from two major social spheres (academia and business press) as well as patterns underlying the combination of such labels. Developing an empirical approach to achieve the aim of this study requires answering a number of questions: Which organizational practices do we consider in this study? How can we systematically capture co-occurrences of a large number of co-existing management practices in two spheres? How can we develop a thorough understanding of whether and how co-occurrences represent theorizing acts? How do we operationalize and empirically test the above hypothesized mechanisms of co-occurrence? We answer these questions in the following sections.

2.3.1 *Data collection*

Identifying the ecology of co-existing practices

We argued that contributing to change existing management knowledge requires embedding an upcoming organizational practice into the ecology of existing organizational practices. Practices from the ecology of existing practices represent potential candidates for combination in theorizing acts, while, from the perspective of an upcoming practice, we expect that more legitimate practices, practices of about the same age and practices from the same niche are more likely to be combined with the upcoming practice. As a first step of data collection we thus aim to identify a relevant ecology of co-existing organizational practices. To do so, we conducted an extensive review of literature dealing with popular organizational practices. We thereby included literature from the past three decades, as the early 1990s have often been described as the starting point of extensive research in this realm – mainly initiated by the work on management fashions by Abrahamson and colleagues (Newell, Robertson, & Swan, 2001; Clark, 2001; 2004; Benders & Van Veen, 2001). In the identified studies a vast array of practices has been discussed: ranging from practices such as Management by objectives or Employee assistance programs which have dominated managerial thinking in the 1950s to practices such as Six Sigma or Customer Relationship Management representing newer management knowledge. Although dominating managerial thinking at different points in time, the life cycles of these practices tend to overlap (Abrahamson & Fairchild, 1999). Based on our review of literature dealing with the rise and fall of organizational practices within the past three decades, we were thus able to cover practices from a time period of roughly six decades.

With academia and business press both representing important social contexts in which organizational practices are theorized, in our literature review we drew on work from both of these two contexts in order to develop a long list of popular organizational practices that have become subject to discussions in these two spheres during the past three decades. Within the academic literature, we heavily relied on prominent studies by Abrahamson (1996), Abrahamson and Fairchild (1999), Carson et al. (2000), Staw and Epstein (2000) and Thawesaengskulthai and Tannock (2008) – all assessing adoption and or diffusion of more than one practice – in order to identify a relevant ecology of organizational practices. In order to also account for more practitioner oriented (business press) literature, we also included articles reporting on the prominent survey on practice use and satisfaction that has been published by Bain and Company in two year intervals since 1992 and authored by Rigby and Bilodeau (2009; 2007; 2005) or Rigby (2003; 2001).[3] These studies have received considerable attention both in business pres (e.g. Harvard Business Manager) and academic research (e.g. (Carson, Lanier, Carson, & Guiry, 2000; Thawesaengskulthai & Tannock, 2008)). Following this approach we identified a long list of more than 80 practices which have been discussed in literature and/or were part of the Bain and Company study.

We decided to alter this basic set of identified practices based on several grounds. First, we removed a number of items from the long list, because especially the Bain survey we mentioned included items we rather classified as mere conceptual tools or technologies and not as organizational practices that capture and describe they way organizational operations can be altered (examples for such tools include “Porter’s Five Forces”, “Price Optimization Models”, “Customer Surveys” or RFID [radio-frequency identification]). Second, for each item on the resulting list, we manually checked whether it actually received considerable attention in academia or business press during the last thirty years. All items for which we were not able to identify at least five articles from five separate years were then excluded from the list (examples include items/practices such as “PERT” [Program Evaluation and Review Technique] or “Micro Marketing”). Third, based on a review of more recent literature on popular organizational practices, we added a number of practices that were not captured by classical studies such as the ones by Abrahamson (1996), Carson et al. (2000) or most recent large scale surveys (Rigby & Bilodeau, 2007), but which received considerable attention in academia and business press in more recent years (examples for such practices we added include “Corporate Social Responsibility” or “Blue Ocean Strategy” (Kim & Mauborgne, 2005)).

[3] Please note that we requested the data from Bain and Company and received xls-files with all practices that have been part of the questionnaire since 1992 and the respective average degrees of implementation and satisfaction as provided by the participants of the survey.

Table 1: List of 53 practices (alphabetical order)

Nr.	concept	Nr.	concept	Nr.	concept
1	Activity Based Management	19	Horizontal Corporation	37	Open Market Innovation
2	Agile Strategy	20	Human Resource Management	38	Outsourcing
3	Balanced Scorecard	21	Innovation Management	39	Pay for Performance
4	Benchmarking	22	ISO 9000	40	Quality Circle
5	Blue Ocean Strategy	23	Job Enrichment	41	Quality Management
6	Business Process Reengineering	24	Joint Venture	42	Scenario Plan
7	Change Management	25	Just-in-Time	43	Sensitivity training
8	Collaborative Innovation	26	Kaizen	44	Shared Service Center
9	Consumer Ethnography	27	Key Account Management	45	Shareholder Value
10	Core Competences	28	Knowledge Management	46	Six Sigma
11	Corporate Culture	29	Lean Management	47	Stock Option
12	Corporate Governance	30	Learning Organization	48	Strategic Alliance
13	Corporate Social Responsibility	31	Loyalty Management	49	Strategic Plan
14	Customer Relationship Management	32	Management by Objectives	50	Supply Chain Management
15	Diversity Management	33	Mass Customization	51	Virtual Corporation
16	Employee assistance program	34	Mergers and Acquisitions	52	Virtual Team
17	Empowerment	35	Mission Statement	53	Work Life Balance
18	Growth Strategies	36	Network Organization		

Resulting from this search strategy and three steps of alteration, we arrived at a list of 53 organizational practices that have been discussed and theorized in relevant literature within the last three decades and that will constitute the ecology of organizational practices we will assess in this paper. We list these practices alphabetically in Table 1. To our best knowledge, no previous study has considered a comparable number of organizational practices and no study has systematically investigated patterns of co-occurrences of a larger number of organizational practices.

<u>Capturing co-occurrences of practice labels in academia and business press</u>

In order to capture snapshots of a representative part of the relevant discourses in academia and business press, we relied on the ABI/Inform Complete database allowing us to differentiate search strategies according to types of media predominantly used in different contexts (see (Barley & Kunda, 1992; Abrahamson & Fairchild, 1999) for a similar approach). We chose the publication type "scholarly journals" as predetermined by ABI/Inform in order to grasp the discourse in the academic sphere. To capture the business press sphere discourse, two types of publications were selected – namely "trade journals" and "magazines".

Co-occurrences of organizational practice labels in the two social contexts were captured by generating search strings consisting of each possible combination of pairs of the 53 organizational practice labels (e.g. "corporate social responsibility" AND "work life balance") we have identified in our literature review described above. We thereby included both varying spellings (such as organization or organisation) as well as singular and plural and other grammatical variations using asterisks (e.g. "core competenc*). For each social context and type of media we thus consider 1,378 (=53*52*0.5) search strings representing single search inquiries. Since we are interested in practice co-occurrences rather than texts dealing with just one practice as the focal topic, we deviated from the established search strategy employed by, for instance, Abrahamson and Fairchild (1999) who only searched subject terms and instead decided to search whole texts (including abstract, subject terms etc.). We only excluded reference sections of texts (an option available in the advanced settings of ABI/Inform) in order to avoid counting co-occurrences of labels that result from titles of referenced work and might thus – especially in academic articles – not represent a theorizing act. We thereby gathered co-occurrence data in the two contexts for the time period 2000 to 2009.[4] In total, we thus captured 1,378 combinations of practice labels in the academic and 2,756 combinations in the business press sphere (since we consider two types of media – magazines and trade journals – in the latter) – meaning that we manually executed a total number of 4,134 search inquiries.

2.3.2 Data analysis

In this study we combine qualitative and quantitative methods in order to both provide a thorough test of our conceptual framework and to allow for its adjustment based on insights that are obviated by mere statistical analyses. The major interest of the qualitative part of the empirical study is to confirm or reject our most basic proposition that in their efforts to theorize organizational practices in texts, producers of these texts relate practices to co-existing organizational practices. A qualitative content analysis of texts in which we find co-occurrences of practices is best suited to achieve this aim because it enables us to explicitly take into account the contextual embedding of actors' communicative acts (Keller, 2008; Bauer & Gaskell, 2000). The quantitative analysis then serves to identify patterns of co-

[4] We actually searched for co-occurrences of practice labels in literature during the last 40 years (1970 to 2009) in five-year intervals (electronic searches were not possible before the early 1970s, see Carson et al. 2000, Abrahamson and Fairchild 1999). However, we only observe a substantial number co-occurrences within the last two periods and thus do not include co-occurrence data from former periods. This may indicate that co-occurrences of organizational practices represent a relatively new phenomenon. However, this observation may also be explained by the fact that full text search is not possible for many older text.

occurrences and to test whether these patterns reflect the social mechanisms as proposed above. We thereby use linear regression models. In the following we describe our methodological approach in more detail.

Qualitative data analysis

As the total number of texts in which we find co-occurrences obviates the possibility to a qualitative analysis of all of these texts (in total we observe more than 150,000 co-occurrences in the two spheres - academia and business press), we decided to analyze a sample of 400 texts: 200 academic and 200 business press texts, randomly chosen from the total amount of texts from these two contexts in which we found co-occurrences. We downloaded the randomly chosen texts from the ABI/Inform Complete database and imported them into MAXQDA. We then analyzed the randomly chosen articles in several steps by applying qualitative content analytic methods (Mayring, 1990). Our approach is described in more detail in the results section.

Quantitative data analysis

Dependent variable: Since we aim to explain the co-occurrences of organizational practice labels, the level of statistical analysis is the co-occurrence or – in vocabulary research language – the word-to-word linkage (Loewenstein, Ocasio, & Jones, 2012). The results of each of the 1,378 search inquiries in the academic and 2,756 search inquiries in the business press context represent single cases in our dataset and together constitute the dependent variable C*o-occurrences*. The dependent variable C*o-occurrences* has a range from zero (the respective concept pair – e.g. Balanced Scorecard and Job Enrichment – does not co-occur in any academic or business press article in the years 2000 to 2009) to 1,513 – the maximum number of co-occurrences we identified for a concept pair which we found for the co-occurrence of Lean Production and Six Sigma business press articles between 2000 and 2009.

Independent variables: We expect that the question whether practices co-occur in texts should be driven by differences in the practices' status of legitimacy, their age and the question whether they provide solutions for similar organizational problems and thus belong to the same niche of practices. In order to test these expectations we developed proxies for legitimacy, age and addressed organizational problem for each of the 53 identified organizational practices. We used the ABI/Inform Complete database as data source for gathering data on a practice's status of legitimacy and age, while information on a practice's niche membership is captured from studying basic literature on the practice which is derived from different sources (e.g. management handbooks). To develop independent variables on the same level of statistical analysis as our dependent variable – namely the co-occurrence – for each pair of practices we calculated differences between the status and legitimacy or age indicators and determine whether they belong to the same niche of practices. The development of independent variables is described in detail below:

(1) Status of legitimacy: With regard to a practice's legitimacy we argue that, over time, practices only get public attention when they are perceived as legitimate – at least by a relevant amount of their audience. We thus assume that practices which do not achieve a high level of legitimacy are only shortly discussed and then rejected. To operationalize a practice's legitimacy status we thus take the mean attention the practice has received in discourse during its life cycle. For each five-year time interval between 1970 and 2009 we determine the number texts in which a practice has been discussed in relation to the total number of articles dealing with one of the 53 practices under study. Based on these indicators for the relative popularity of single practices in relation to all other practices, we calculate the mean attention a practice received over the whole time period of its "existence" as an indicator for its popularity. Based on the popularity measure for each practice, we calculated the popularity difference between each practice pair. Higher values of this variable "*Popularity difference"* thus indicate that one of the two practices is much more popular than the other whereas lower numbers indicate similar popularities. Since we found that popularity differences exhibit extraordinarily high values for some concept pairs, we also calculated the squared term of popularity difference for each practice pair in order to account for a potential curvilinear influence of popularity difference on practice co-occurrence (*Popularity difference sq.*).

(2) Age difference: We operationalize practice age using two indicators. First, we reconstructed practice *total ages* based on the first occurrence of the respective practice label. In order to make sure that the practice represents a major subject matter of the respective text, we restrict our search the

abstracts of articles. Second, we argue that the first naming of the practice's label does not necessarily initiate the practice's diffusion. If the label is not picked up and used by other authors, the practice may remain a "latent" practice (Abrahamson & Fairchild, 1999). Hence, we captured each practice's occurrence in literature during the last 40 years (1970 to 2009) in five-year intervals (making eight periods). We then calculated for each period how the number of articles discussing the practice has changed in relation to the previous period. The period in which we observe the largest relative increase thereby represents our second age indicator which we interpret as the *take-off* of the practice's diffusion on a larger scale and thus as the potential beginning of a fashion or trend. Since we capture occurrences in eight periods, seven values for relative changes can be calculated meaning that the takeoff-age of practices can take the values from 0 to 7. The two age indicators represent different theoretical constructs that both deserve attention. For instance, while corporate social responsibility has been firstly referenced in literature more than 60 years ago, it has only recently experienced diffusion on a larger scale. For each pair of practices, we thus compute the difference in total age (*Total age difference*) and the difference in takeoff age (*Takeoff age difference*). Thereby, it is notable that the two variables do not correlate meaning that they can both be included in regression models without worrying about multicollinearity effects.

(3) Different group: In order to operationalize the general organizational problem an organizational practice is supposed to resolve, for each practice we identify the organizational or research area it is stemming from and we group the 53 practices accordingly. This grouping rests on the assumption brought forward by Abrahamson and Fairchild (1999) that certain niches with a limited carrying capacity (e.g. implementation resources by organizations, attention by relevant audiences) exist and that these niches are thus linked to areas of activity (and thus budget constraints etc.) of potential adopters. We thereby identify five groups of practices for which we assume that they represent niches with a limited carrying capacity both within organizations that are potential adopters and within areas of academic (management) research: Finance and Controlling, Human Resource Management, Marketing and Sales, Production and Operations Management, Strategy and Organization. Practices thereby spread unevenly across these organizational areas (see descriptive statistics). For each co-

occurrence we coded whether two practices from the same or from different groups are combined resulting in a binary variable (*Different practice groups*).

(3a) Different group_detail: Regardless of the fact if we observe the general group-related effect it might be of interest to learn more about which specific groups co-occur more or less often together and can thus be made "responsible" for the existence or absence of the overall effect. For each co-occurrence we also coded the specific combination of groups (e.g. "Finance and Controlling" and "Marketing and Sales") arriving at 10 binary variables.

(4) Interaction effects: We assume that both age and popularity-based effects should be stronger for practices belonging to the same group. We thus calculate interaction effects between the binary variable indicating whether practices belong to the same group of practices and the difference in the practices' ages (*Total age difference x Different Practice groups, Takeoff age difference x Different practice groups (0/1)*) and the popularities (*Popularity difference x Different practice groups*).

(5) Control variables: Since we considered two types of media (trade journals and magazines) in the business press context, we control for the media type (*media==mag*).

We test the above propositions using linear regression analyses. In order to account for the fact that co-occurrence patterns may change over time, we thereby rely on fixed effects models, thus controlling for the time period in which the co-occurrences has been observed.

2.4 Results

2.4.1 Qualitative analysis: Do we observe theorization efforts?

Following Strang and Meyer (1993, p. 492), we have defined theorization by referring to its two major elements: First, the “development and specification of abstract categories” and, second, “the formulation of patterned relationships such as chains of cause and effect.” In addition, we have claimed that an important component of theorization will be the attempt by theorizers to connect a focal knowledge object – i.e. organizational practice – to other knowledge objects. Taken together, we have assumed that combining organizational practices in one text is a common strategy theorizers use in order to embed a focal practice into the existing stock of management knowledge. The main objective of this qualitative analysis is to revise this basic assumption and to answer the following question: Do we really observe theorization? To do so, we aim at identifying and understanding *how* co-occurring organizational practices are combined by authors of texts – i.e. whether and how some relationship between these co-occurring knowledge objects is constructed. Our qualitative analysis can thus be seen as a necessary step prior to our quantitative assessment of co-occurrence patterns because it helps to situate countable co-occurrences in a way that makes it possible to validly interpret later quantitative insights which 'merely' result from a counting of a large number of co-occurrences. We therefore manually coded co-occurrences of practice labels in a chosen sub-sample of 400 texts taken from the more than 150,000 texts in which we find co-occurrences of the 53 chosen organizational practices. Our coding approach thereby consists of several steps which are described below.

Co-occurrences as semantic connections

Although arguing that combining organizational practices in texts should represent an important aspect of theorization, we would not assume that each co-occurrence of two organizational practices we have identified using the above described search strategy will signify an act of theorization. Our first step of coding was thus devoted to separating texts in which practices were semantically connected – and that might thus contain acts of joint theorization – from those texts in which two practices co-occurred without a semantic connection (e.g. in two separate paragraphs without reference to each other). To do so, for each of the 400 chosen texts we read the title and abstract in order to get a first impression of the general theme of the text. We then searched for the co-occurring practice labels in each text. If the two labels occurred in the same paragraph or were generally closely spaced, it was in most cases possible to decide whether the texts were relevant by reading the respective text passage. If practice labels were not mentioned in the same text passage, we read a larger part of the text or the whole text in order to decide whether some kind of semantic connection between the two co-occurring practices was at least indirectly constructed or not. In some texts, we thereby found practices – although mentioned in separate paragraphs – that exhibited indirect semantic connections, e.g. because they were both explicitly linked to the text's major theme.

In this first step we thus broadly classified the texts based on the following two categories: (1) co-occurrences which can be classified as “semantically connected” and (2) co-occurrences where this is not the case (“semantically unconnected”). In texts that were classified as falling into the second category “semantically unconnected”, the co-occurring organizational practices mostly played a minor role and were not the major theme of the text. In these cases, for instance, one of the practice labels may only be mentioned in the author description while the other label is mentioned to – for example – describe the situation of an organization (see appendix 1 for some examples). After conducting this first step of coding we arrived at a set of 196 (49% of coded texts) articles falling into the category “semantically connected” and 204 texts falling into the category “semantically unconnected”. We did not observe systematic differences between these two text-subsamples (e.g. with respect to specific combinations of concepts that rather tend to co-occur without a semantic connection compared to other concept combinations). In view of the quantitative analysis of all co-occurrences we thus have no reason to believe that the share of texts in which no obvious semantic connections are observable will bias our results. Furthermore, the observation that we identified semantic connections between co-occurring practices in roughly half of the analyzed texts supports the idea that jointly discussing two or more organizational practices in one text represents a common ‘strategy’ theorizers – in this case authors of academic and business press articles – employ. As theoretically expected, the explicit embedment of a focal practice into the ecology of co-existing practices thus seem to be an important facet of theorization that has so far only received limited attention.

Classifying co-occurrences

In the second step of our qualitative text-analysis, we open-coded (Bauer & Gaskell, 2000) those 196 texts that had been classified as containing “semantically connected” for how organizational practices are combined. We thereby performed several coding cycles, thereby iterating between data and theory. In sum, we were thereby able to identify 23 prototypical ways of how co-occurring organizational practices were semantically connected. These initial categories could be aggregated to five broader categories and finally to two main categories (Table 2).

Please note that some of the initial categories can be grouped under different broader categories: we find that texts providing empirical support in the form of best practices, qualitative or anecdotal evidence (initial categories nr. 15, 16, and 17) can either fall in the broader category enabler/driver or integration. In the following sections, we describe the five broader and two main categories in detail.

Table 2: Main, broader and initial categories

	main categories		broader categories		initial categories
1	constructing abstract categories	1	group belonging	1	Same group
				2	Different groups
				3	Enumeration of concepts
		2	hierarchical relationship	4	Concept hierarchy
				5	Definition / description
				6	Integral part / component
				7	Measure / model
2	patterned relationships	3	enabler / driver	8	General Enabler
				9	Mutually enabling
				10	Precondition
				11	Result
				12	Recommendation / Normative Statement
				13	Revival
				14	quantitative evidence
				15	best practice / taken-for-granted
				16	anecdotal evidence
				17	qualitative evidence / meta-study
		4	integration	18	Integration argument
				19	Concepts "merge"
				15	best practice / taken-for-granted
				16	anecdotal evidence
				17	qualitative evidence / meta-study
		5	competition	20	Signal word
				21	Conflict (e.g. of interests, logics)
				22	Alternatives
				23	Superiority

Please note that we added accentuations (bold letters) in the following examples in order to display the two co-occurring practices and the major argument in a more comprehensive way. Please also note that in some cases we did not find the exact search term in the provided examples (e.g. “management of change” instead of “change management”, "culture of company X" instead of "corporate culture"). However, in all of these cases the exact search label can be found somewhere else in the text and/or in the subject terms that are provided by the author(s) of the text so that modified terms used by the authors can be interpreted as a reference to the concepts we are interested in.

Constructing abstract categories

Group belonging

One common way two practices were semantically connected was through referring to their *group belonging*. As can be seen from the following examples, two combined practices are thereby either described as belonging to the same or to different groups, as falling into the same or different categories, as applicable in the same or in different industry and as part of the same organization.

> *"In the conceptual development of management change* ***initiatives such as knowledge management, the learning organisation*** *or best practice management, social science knowledge is often used to formulate 'new' approaches (Jaffee 2001)." (same group)*
>
> *"To help address this planning and implementation challenge, this paper forwards an updated version of a planning technique known as force field analysis and illustrates its use in planning and organizational development initiatives.* ***Such initiatives include execution of strategic plans, re-engineering*** *efforts, quality improvement programming, merger and acquisitions, and, other project implementations." (same group)*
>
> *"In order to stay competitive, maintain cost-effectiveness, and achieve reasonable profitability, companies have for many years* ***used business philosophies (e.g. supply chain management (SCM), just-in-time (JIT),*** *quick response (QR) and efficient consumer response (ECR)) that take into consideration time, functional and relational dependencies between business activities in supply chains." (same group)*
>
> *"P4: The strategic mode for e-business is a concurrent application of tight and loose coordination, with the focus of core business on tight coordination,* ***both internal (e.g., ERP*** *and BPR) and* ***external (e.g., SCM*** *and CRM), while the focus of non-core business is on loose coordination (e.g., e-marketplace)." (different groups)*

We also found that practices were combined in lists of practices which are described as popular, industry-specific, or oriented towards a specific goal. Developing a list of – for instance – practices or "themes centred on organizational efficiency and better use of the workforce", or practices both contributing to make sure that "the reduction was made possible" (see examples below) points to certain similarities between the practices in the list and thus can be described as contributing to developing or changing managerial knowledge. The following examples show how practice groups are created using enumeration:

> *"For example, in both MIS Quarterly and Organization Science, the general tenor of the contributions around 1990 reflects a focus around* ***"total quality management,"*** *"just-in-time-engineering,"* ***"empowerment," and other themes centred on organizational efficiency and better use of the workforce.*** *" (enumeration)*
>
> *"Such thinking as the basic framework for how the international business should operate was a philosophical change that took effect roughly five years ago when Menzer vacated his role as cfo of Wal-Mart to lead the international group. At that time there were 450 international associates based in Bentonville. Today the home office staff numbers roughly 150.* ***The reduction was made possible****, Menzer explained, because "there is less monitoring and running the business and* ***more strategic planning, mergers and acquisitions****, integration and coaching. As the countries continue to take on more responsibilities, we are trying to get ahead of them to help them grow the business and make them successful," Menzer said." (enumeration)*

By describing combined practices as belonging the same or to different groups or categories, theorizers explicitly or implicitly point to existing similarities or dissimilarities between practices, e.g. with regard to basic principles and assumptions, potential areas of application, or typical goals that can be achieved when adopting the practices according to their promoters. Both emphasizing shared or distinguishing features among practices thereby contributes to the development of abstract categories suggesting the interpretation that when co-occurring practices labels are combined by pointing to their group belonging, this effort can be – in line with the definition of theorization provided above – regarded as a theorizing act.

Hierarchical relationship

A second broad category that we identified we named *hierarchical relationship*. We observed that when practices are combined in one text, the authors often point to a hierarchical relationship between the two practices. This is done by describing one practice as a sub-practice of the other practice. In these cases one practice may be described as representing an umbrella concept or an overall philosophy, while the other practice is rather described as following this philosophy or as part of the group of practices the umbrella concept subsumes. The following text passages exemplify the construction of such a hierarchical relationship:

> *"In the automotive industry the* ***term JIT*** *(e.g. Sugimore et at, 1977; Toyoda, 1987) has been used, while in the textile and retail industries the terms QR (e.g. Stem et at, 1996) and ECR (e.g. Kurt Salmon Associates, 1993; Fernie, 1994) have been applied. These* ***terms may all be grouped under the umbrella of SCM****." (umbrella concept/sub-concept)*
>
> *"The* ***JIT movement also spawned*** *a separate movement that ultimately became larger than JIT itself* **- Total Quality Management***(TQM)." (umbrella concept/sub-concept)*

A hierarchical relationship can also be identified when practices are described as representing an integral part, a component or part of the definition of a second practice or when they are used to measure or to model the second practice as the following examples demonstrate:

> ***Balanced Scorecards are "...a strategic management tool that helps you measure****,* ***monitor, and communicate your strategic plan*** *and goals throughout the organization, in a way that is understood by everyone." (definition)*
>
> *"An* ***outsourcing transaction, he explains, is "an enterprise change event"*** *that requires a change management program to make the appropriate adjustments and communicate that changes are coming." (definition)*

> *"Yet surely **learning is a concept central to Knowledge Management**, as revealed by "Organizational Learning," producing the single largest grouping of records within the aggregate." (integral part)*
>
> *"The reason why some of the schemes do not continue is that they do not follow some simple **rules of loyalty management**, which are summarised as follows: - know how **CRM** makes money: assess which value drivers are in scope; ensure all **CRM** activities are targeted at driving value; omit activities that do not add value." (integral part)*
>
> *"That is to say, **they have measured a company's corporate culture by** either surveying employees as to their perceptions of their company's values, business practices, and so forth (Hofstede, 1983; Meyerson &Martin, 1987), or by analyzing various internally distributed documents, such as a company's **mission statement**, goals, strategic plan, and so forth (e.g., Hofstede, Neuijen, Ohayv, &Sanders, 1990; Pettigrew, 1979)." (measure)*

When constructing hierarchical relationships between two practices in one text, theorizers may specify and refine the audience's understanding of the constitutive elements of the two practices. In addition, hierarchically linking practices to each other contributes to the development of ontological structures between practices thus refining or changing the social stock of management knowledge.

Taken together, theorizers combining practices by pointing to their group belonging or by constructing a hierarchical relationship between them seem to focus on creating a relationship that is based on the practice's contents and the depiction of similar or different features of practices. The two ways of combining practices just described – group belonging and constructing hierarchies – corresponds to the first part of the definition of theorization we have outlined above, "the development and specification of abstract categories". While through grouping and categorizing practices, theorizers contribute to *developing* abstract categories (such as "practices related to quality issues"), constructing hierarchical relationships between practices contributes to *specifying* these categories or their components by proposing (hierarchical) ontological orders (e.g. "Quality circles are a component of TQM").

<u>Constructing patterned relationships</u>

Enabler/driver/precondition

In addition to combining practices by allocating them to abstract categories, we observe that practices are frequently combined by proposing that a causal relationship exists between practices, meaning that practices may condition each others' diffusion and/or implementation. In these cases, an organizational practice was described as an *enabler or driver* of a second practice – e.g. when one practice is described as a precondition for the second practice's successful diffusion or when the successful implementation of a second practice is said to strongly depend on the existence or the previous or joint implementation of the focal practice. The following examples capture the construction of such a relationship:

> *"**TQM implementation failures** are often addressed as general implementation problems related to the **management of change** (Reger et al. 1994; Knights and McCabe 1999) without sufficient analysis of the content to be changed. This analysis suggests that the success of implementation depends on existing organizational culture." (precondition)*
>
> *"Embedding the mechanisms for monitoring the KPIs within the processes of the organisation will create the framework for **continual improvement that will be achieved if the empowerment** and participation of staff is retained into the future." (precondition)*
>
> *"**Virtual organizations enable organizational and/or individual core competencies** to be brought together when needed, and disbanded when no longer required (See: Williamson, 1991; Varadarajin, Cunningham, 1995; Becker, Kugeler, Rosemann, 2000)." (general driver/enabler)*
>
> *"According to Cox et al. (1997), collaborative **benchmarking** has been viewed as a process **for facilitating organizational learning** among participating members." (general driver/enabler*

In some cases a focal practice may thereby even be described as contributing to the revival of a second practice as the following example shows.

> *"Teece et at (1997 p. 519) argue for the imperfect irritability of lean practices: "[...] **lean production** requires distinctive shop floor practices and processes as well as distinctive higher-order managerial processes ... [and] ... replication may be difficult because it requires systemic changes throughout the organisation and also among interorganisational linkages, which may be very hard to effectuate". The relevance and robustness of Hayes and Wheelwright's "best practices" foundation was confirmed empirically by Flynn et al. (1999) **who also updated and improved it by adding newer practices such as just-in-time (JIT).**" (revival)*

In the above examples, the proposed causal relationships between the combined practices are constructed without providing any (empirical) evidence but are stated in a rather normative way. In other text passages we found and coded as falling into this category, empirical and anecdotal evidence for the existence of the proposed relationship is provided. Authors thereby frequently provide statistical results from existing studies or conduct a quantitative analysis themselves in other to “prove” the proposed relationship. For instance, a study may be provided which shows that a statistical relationship between the implementation of one practice and the degree of goal achievement that is related to a second practice (e.g. “The study shows a strong relationship between human capital and shareholder value creation over both the short and long term”, see examples below).

> *“There is no question that it pays to manage people and performance right. This is substantiated by the Human Capital Index (HCI), an ongoing study that Watson Wyatt undertakes to quantify exactly which **HR practices and policies have the greatest correlation to shareholder value**." (quantitative evidence)*
>
> *"This is the era of people and people practices," says Teri Brown of Watson Wyatt Worldwide in Toronto. "What have traditionally been perceived as soft issues -- **corporate culture**, training and development, hiring and recruiting methods -- can influence hard outcomes. Until this study, it was difficult to prove the relationship between business success and these practices; our research showed that companies with a high index had high shareholder value and those with a low index had low shareholder value." **The study shows a strong relationship between human capital and shareholder value creation over both the short and long term**" (quantitative evidence).*

Empirical evidence may also be provided on a qualitative basis. Again, this may be done by pointing to existing studies or by conducting a qualitative analysis – e.g. a case study – in the text in which the practices are combined:

> *"No one disputes the economic impact of **supply chain management**. **Study after study has linked supply chain performance to shareholder value** and shown that total supply chain costs account for more than half of the finished cost of a typical product." (qualitative evidence/meta-study/case study)*
>
> *"Managing innovation in regional **supply networks**: A Dutch **case of "knowledge industry** clustering" (qualitative evidence/meta-study/case study)*

In other cases, authors provide anecdotal evidence for the proposed relationship by, for instance, describing the proposed combination as a best practice. The described relationship is in these cases treated as unquestionable and widely accepted - as taken-for granted. Although representing a normative statement, by providing such arguments producers of texts create the impression of existing evidence.

> *"**Best-practice learning organizations have and will** continue to deliver reasonable indicators along multiple **balanced scorecard** learning measurement dimensions such as learner satisfaction, learning effectiveness, job impact, business results, and ROI." (best practice/taken for granted)*

By describing practices as drivers or enablers of the diffusion or implementation of other practices – be it through a simple claim or based on empirical evidence – theorizers construct chains of cause and effect between the combined practices in the sense of “if a firm plans to implement TQM it needs to set up a Change Management program”. Constructing such causal relationships corresponds to the second part of Strang and Meyer's (1993) definition of theorization which refers to the "formulation of patterned relationships such as chains of cause and effect".

Integration

Another way of combining popular organizational practices is to argue that they can or should be integrated. The *integration* of practices is thereby often described as contributing to achieving a certain goal or fulfilling a relevant task (e.g. "detect the general critical success factors", "choosing a strategic direction", see examples below).

> *"In particular, insights in supply chain management,* ***innovation management*** *and* ***knowledge management need to be integrated in order to detect*** *the general critical success factors of innovation through such types of inter-organizational networks." (integration needed)*
>
> *"What are the essential ingredients in* ***choosing strategic direction****? This process of policy management engages senior management with the board to focus on a policy regarding the future and* ***then it integrates strategic planning, change management****, and project management with the performance management methods that focus on delivering results." (integration needed)*

The construction of a relationship is thereby in some cases based on normative statements - as in the examples provided above - and in other cases based on any kind of evidence (e.g. anecdotal evidence, expert knowledge).

> *"IT* ***outsourcing veterans say building benchmarking into outsourcing*** *contracts enables them to feel more comfortable signing longer-term deals because they know they're covered as the market changes." (best practice/taken for granted)*

Besides expressing the need or possibility for integration, authors also combine practices by arguing that integration already seems to have taken place. Combined practices are then explicitly or implicitly described as merging (e.g. Lean Six Sigma) or are treated as interchangeable or as synonyms. Since integration is in these cases treated as having already taken place, integration between combined practices is rather described as an observation. As a result, supporting the integration idea by, for instance, relating it to the achievement of a certain goal or the fulfillment of a specific task does not seem to be of central importance. Theorizers rather tend to provide some evidence for supporting the observation they have made (in the following example, the existence of a book is provided to support the observation that two practices are merging):

> *"Despite traveling separate paths since emerging from JIT, it now appears that the **Lean Manufacturing and Six Sigma movements are about to merge**, as suggested by the recent best-selling management book **Lean Six Sigma** (George 2002)." (integration achieved/merger)*

The described possibility or necessity to integrate organizational practices points to existing similarities between them, while relying on the fact that they are dissimilar enough so that they have been so far treated as distinct. With such integration arguments, authors (implicitly) propose that the abstract knowledge captured by the two distinct practices can be combined in order to, for instance, to achieve relevant organizational goals, thereby proposing a specific kind of causal relationship between the two practices (if a firm jointly implements or integrates practices A and B, the intended effects will be greater than solely implementing practice A or B or not integrating practice A and B). In contrast to the above category enabler/driver, the constructed causal relationship does thereby not necessarily exist *between* the two combined practices but between the integrated/combined use of both practices and some organizational goal or task.

Competition/Conflict

Finally, we observe that producers of texts as potential promoters of organizational practices in some cases explicitly emphasize the *competition or conflict* between co-existing practices by, for instance, pointing to the superiority of a focal practice over a second, co-occurring practice. This is in some cases achieved by describing the advantages of the promoted practice or the weaknesses of the supposedly outperformed practice. Superiority can also be indicated by actively pointing to the legitimacy of the focal practice and the illegitimacy of the co-occurring practice. A co-occurrence can also be described as falling into this category and being driven by the underlying competition between practices when the author points to the larger diffusion success of one of the practices.

> *“The **JIT movement** also spawned a separate movement that ultimately **became larger than JIT itself-Total Quality Management** (TQM)." (superiority)*
>
> *"Similarly, research on foreign market entry modes has identified asymmetric information and other sources of **inefficiencies surrounding international M&As that lead firms to opt for joint ventures** (e.g., Balakrishnan and Koza, 1993; Hennart and Reddy, 1997; Reuer and Koza, 2000)." (superiority)*
>
> *"Many key questions remain unanswered. Will the more mechanistic approaches to six sigma lead to employees working in a more command and control culture, opposing the current organic and people based culture of business improvement in many organisations? For example, **is six sigma a methodological development and subset of***

> ***broad-based total quality management (TQM) or is it a distinct philosophy and methodology with a harder focus?*** *Is TQM an essential precondition for effective six sigma implementation?" (superiority)*

> *"**Use of stock options** in board compensation programs **will decline in favor** of full value grants that provide an immediate ownership component. **Corporate governance experts have long expressed concern that excessive use of options** in board pay programs rather than full value grants promotes a short-term focus, similar to the effect large option grants have had on senior executive pay. Moreover, as optionees, the prolonged market slump has affected directors as well as employees. Average option values fell for the first time to $59,695, or 39% of total compensation."(delegitimation)*

The competition/conflict category also subsumes co-occurrences in which a conflict between the co-occurring practices is described – be it a conceptually grounded conflict between the practices or a conflict that is empirically observable. The latter may thereby occur due to misuse of one of the practices. Co-occurrences falling into this sub-category are thereby often indicated by signal words such as ”fight back” or “versus” – as shown in the following examples.

> *“Most of us perceived that the Japanese miracle was built on quality, with techniques like statistical process control, as introduced to them by the American Edwards Deming, and **quality circles**, in which eager groups of assembly workers met to discuss how to improve processes and products. How could we **fight back** when we already had rejected the industrial engineering of Taylorism as too inhumane, and all we had left were suggestion boxes that no one took seriously? Ultimately we responded with **employee involvement programs** (Lawler, 1986) that we married to new and improved quality measurement and problem-solving techniques.” (conflict / signal words)*

> *"Though shareholders are yet to get their due in this era of managerial capitalism, another new generation of thought process has arisen which demands that the benefits of the corporation be maximized and extended to all those who are either directly or indirectly connected with it. What was proposed as **corporate social responsibility** by Howard Bowen in the early 1950s gained impetus with academics proposing a rehashed version of it with broader connotations and termed it the **stakeholder theory**. Literature documents a raging debate on the **shareholder versus stakeholder theory** with proponents of each theory defending their viewpoints vehemently and also convincingly. Separation of ownership and control thus led to a spate of theories being developed given the nature of conflicts in interests among the actors of the corporation." (conflict / signal words)*

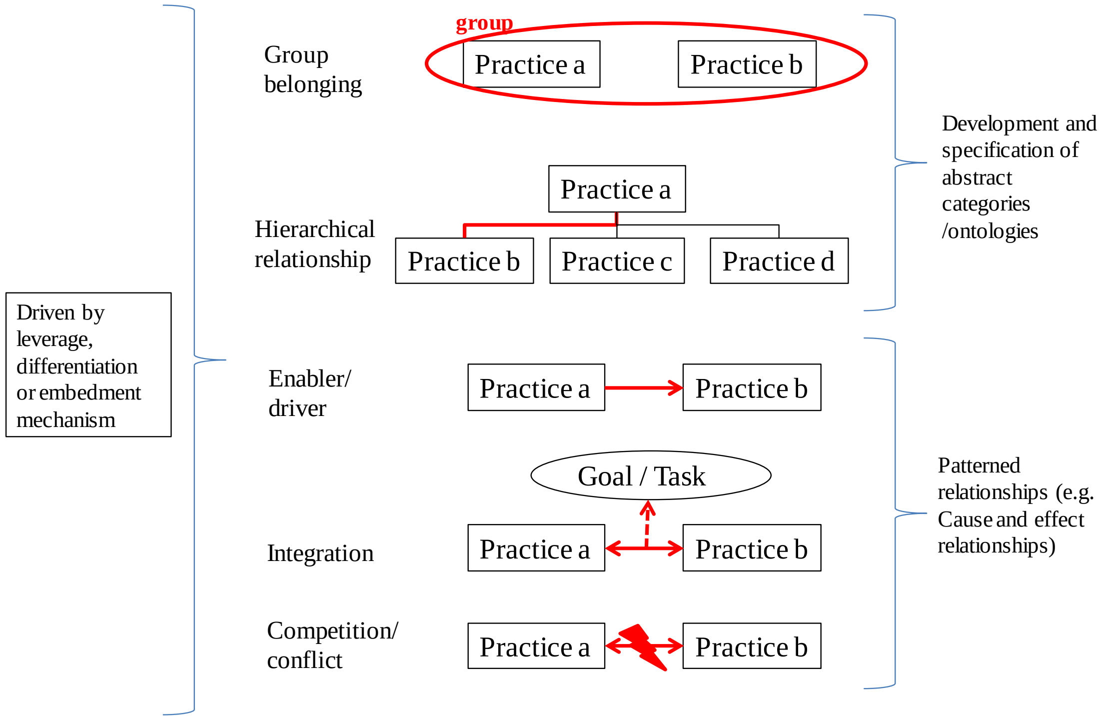
One basis for competition- and conflict-based arguments is that practices that are combined in texts represent alternatives for achieving similar organizational goals (e.g. M&As and Joint ventures both represent market entry modes) or fulfilling similar tasks in the same areas of organizational life (e.g. shareholder value management and stakeholder management both represent strategic orientations). These similarities with regard to the content of the combined practices represent the basis for the existing conflict or competition. Basically, these arguments are thus based on the creation of the belief of a causal relationship between, for instance, implementation of an organizational practice and goal achievement or task fulfillment. When promoting one of the combined practices, theorizers provide arguments for why the relationship between the focal practice and the goal or task is stronger than between the other practice and the goal or task. In cases where theorizers take a rather neutral view and serve as critical observers of the competition/conflict rather than fueling it, they do not necessarily refer to the strength of the relationship.

When combining practices in texts by describing one of the practices as enabling the diffusion or implementation of the second practice, by pointing to how practices can or should be integrated to achieve a certain goal or fulfill a task, or by focusing on the competition or conflict between the two practices, theorizers construct causal relationships between the two practices or the practices and a greater goal or task. Taken together, this corresponds to the second part of Strang and Meyer's (1993) definition of theorization which points to the "formulation of patterned relationships such as chains of cause and effect".

Discussion of qualitative results

In our qualitative analysis of texts in which we find co-occurrences we were able to identify five ways of how relationships between the combined practices are constructed. As denoted above, the resulting five categories can be further aggregated to two categories which resonate with the two elements of theorization as defined by Strang and Meyer (1993). We thus find that, on an abstract level, when practices are combined theorizers tend to contribute to the development and specification of abstract categories or the creation of patterned relationships such as chains of cause and effect. Our basic proposition that an important aspect of theorization is the joint discussion of two or more organizational practices thus seems to hold: We found that in roughly half of the texts containing co-occurrences we analyzed, the two practices were in fact semantically connected. We were further able to show that – whether more explicitly through presenting one practice as superior to another practice – or more implicitly – e.g. through grouping and categorizing practices – these semantic connections can be interpreted as acts of theorization when applying Strang and Meyer’s original definition of the concept (for an overview of coding categories see Figure 1).

Figure 1: Coding categories overview



What we have (not) learned so far

We have shown that theorization often involves the joint discussion of two knowledge objects and *how* such combinations contribute to the creation of knowledge. But – as stated before – we are especially interested in explaining the patterns underlying such theorization processes – i.e. those factors that help to explain *which* knowledge objects theorizers tend to combine when aiming to change an existing stock of management knowledge. Such patterns are hard to identify using qualitative techniques: An author of a text might try to *leverage* an upcoming concept by enumerating it together with certain other concepts, by proposing its integration with other concepts or by pointing to conflicts between practices. When aiming to *differentiate* an upcoming practice from other practices competing for the limited attention of researchers or organizations (differentiation mechanism), promoters of that practice might discuss how the promoted practice is better able to contribute to achieve a certain organizational goal than a second upcoming practice (competition category). However, differentiation can also be achieved when theorizers make clear that the promoted practice and the other upcoming practice are applicable in slightly or completely different organizational areas (group belonging category).

In short, the specific intention of the theorizer as well as certain explicit or implicit prescriptions of how to combine knowledge elements that are purported by the medium or speech community he is bound to are hardly observable qualitatively – at least not without imputing some specific motives to the author. In order to uncover patterns underlying the combination of knowledge objects and by this means to explain how the production of new management knowledge is systematically influenced by existing management knowledge, we will thus rely on statistical assessments of co-occurrence patterns that are described in the following section.

2.4.2 Quantitative analysis: Descriptive statistics

Descriptive statistics: single practices

General characteristics of single practices

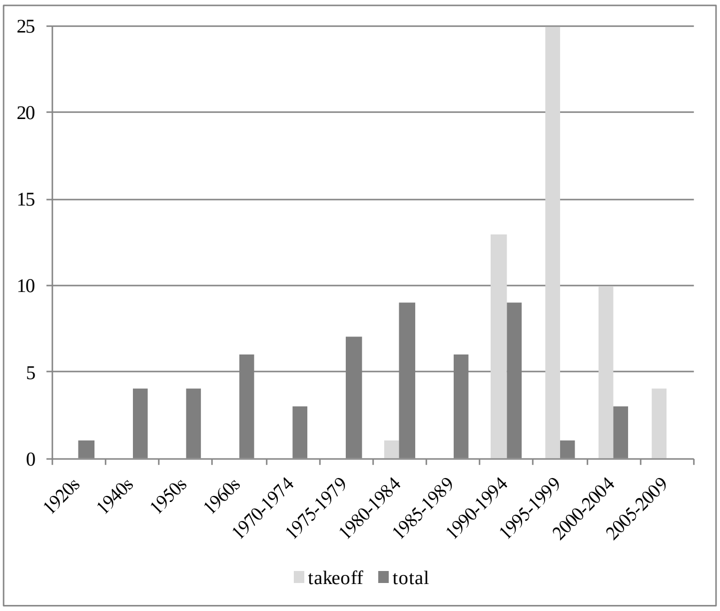
As described above, we expect that the question whether practices co-occur in texts should be driven by differences in their popularity, their total and takeoff ages and the question whether they belong to the same niche of practices. In order to calculate these differences – which then serve as independent variables in our following statistical analysis – for each of the 53 practices we first capture popularity, total and takeoff ages as well as the practice niche they are part of. The results of this step of data collection are summarized in Table 3 and are shortly described in the following.

On average, the practices we consider in our study have been mentioned as such for the first time roughly 33 years ago while we observe quite some variation in practices' *total ages (in 2010)* (standard deviation of 16.52, compare Table 3).[5] The discourse on organizational practices considered in our study was thereby initiated more than 80 years ago with discussions on the practice “Empowerment”, thus representing the oldest practice in our population according to its first naming. The latest practice that was added to the managerial discourse considered in our study is “Blue Ocean Strategy” which first appeared in literature in 2004. The oldest practice with regard to its *takeoff age* is “Quality Circles”. Only short after having been named in the relevant literature for the first time in 1979, the

[5] Please note that in order to make sure that the texts we identified as indicating the first naming of a practice were really dealing with the practice as such, we searched for the label in the text. For more details concerning a practice's first naming see appendix 2.

attention this practice received increased dramatically.[6] In general, while new organizational practices have been more or less continuously introduced over the last almost a century, the discourse on organizational practices gained prominence after 1990. As shown in Figure 2, the number of practices that has been named for the first time in a certain time period is more or less constant or at least we do not observe a clear and strong peak. In contrast, a peak is clearly observable concerning the takeoff age as the figure shows that the discourse on many practices took off in the late 1990s. Taken together, our observations support the idea that the two age variables represent different theoretical constructs.

Figure 2: Number of practices with first appearance or takeoff per period



Considering practice popularity we observe that an average practice in our dataset is discussed in 4154 academic or business press texts as shown in the column *total occurrences*. As indicated by the high standard deviation (5519) and the high discrepancy between the minimum (1 article) and the maximum value (27826 articles), the practices in our study strongly differ with regard to the amount of attention they have received so far. This observation also holds when considering the transformed *popularity (variable)* indicating the mean relative popularity single practices received over the course of their existence in relation to the popularity of all other practices within the same time span.

[6] Please note that Abrahamson and Fairchild (1999) identify 1967 as the year in which the first paper on quality circles was published ((Juran, 1967) "The QC circle phenomenon." Industrial Quality Control, 23: 329-336). The highly specialized journal is, however, not available in typical databases such as Ebsco or ABI/Inform Complete (only the successor journal "Journal of Quality Technology", first published in 1989, can be accessed via ABI Complete).

Resulting from the observable variety with regard to practice age and popularity, the ecology of 53 practices we chose to assess should allow us to observe whether the above developed expectations concerning combinations of practices hold empirically.

Table 3: Descriptive statistics on the level of the 53 organizational practices

nr	practice	niche	first appearance	Takeoff period	total age (in 2010)	approx. takeoff age*	approx. latency phase	total occurrences	popularity (variable)	number of practices	ratio
41	**Activity Based Management**	Finance/Controlling	1991	1995-1999	19	15	4	188	1.77	19	73.48%
1	**Balanced Scorecard**	Finance/Controlling	1991	2000-2004	19	10	9	2488	6.90	33	67.04%
2	**Change Management**	HRM	1973	1995-1999	37	15	22	5759	19.47	37	67.27%
3	**Corporate Culture**	HRM	1976	1990-1994	34	20	14	9007	38.24	38	59.13%
4	**Corporate Governance**	Finance/Controlling	1961	2000-2004	49	10	39	9605	39.35	35	55.87%
5	**Corporate Social Responsibility**	Strategy/Organization	1963	2005-2009	47	5	42	4074	8.89	31	62.15%
6	**Human Resource Management**	HRM	1967	1995-1999	43	15	28	13257	33.77	38	56.05%
7	**Joint Venture**	Strategy/Organization	1941	1995-1999	69	15	54	16948	265.06	35	41.74%
8	**Just-in-Time**	Production	1981	1990-1994	29	20	9	5114	40.24	35	47.12%
9	**Knowledge Management**	HRM	1975	2000-2004	35	10	25	7990	14.31	37	59.29%
10	**Learning Organization**	HRM	1980	1995-1999	30	15	15	2810	13.70	29	68.81%
11	**Mergers and Acquisitions**	Strategy/Organization	1948	1995-1999	62	15	47	7717	69.15	35	59.10%
12	**Quality Management**	Production	1958	1990-1994	52	20	32	8807	42.88	35	51.98%
13	**Shareholder Value**	Finance/Controlling	1981	1995-1999	29	15	14	4678	30.43	36	56.09%
14	**Stock Option**	Finance/Controlling	1940	1995-1999	70	15	55	4386	42.63	32	54.74%
15	**Strategic Plan**	Strategy/Organization	1948	1995-1999	62	15	47	20140	109.06	42	46.91%
16	**Work Life Balance**	HRM	1992	2000-2004	18	10	8	3463	10.86	30	43.62%
17	**Supply Chain Management**	Production	1971	2000-2004	39	10	29	9506	37.97	37	63.92%
18	**Lean Management**	Production	1975	1990-1994	35	20	15	1131	2.85	40	76.15%
19	**Innovation Management**	Strategy/Organization	1978	1995-1999	32	15	17	3056	3.18	26	62.41%
20	**Customer Relationship Management**	Marketing	1984	2000-2004	26	10	16	6061	33.11	36	55.06%
21	**Key Account Management**	Marketing	1984	2005-2009	26	5	21	142	0.76	14	59.33%
22	**Business Process Reengineering**	Strategy/Organization	1980	1995-1999	30	15	15	1652	5.70	31	67.58%
23	**Mission Statement**	Strategy/Organization	1977	1990-1994	33	20	13	2799	20.38	29	47.35%
24	**Kaizen**	Production	1985	1990-1994	25	20	5	1014	5.35	27	77.57%
25	**Pay for Performance**	HRM	1967	1990-1994	43	20	23	2053	6.98	26	60.10%
26	**Management by Objectives**	HRM	1958	1990-1994	52	20	32	308	5.15	23	87.28%
27	**Diversity Management**	HRM	1989	1995-1999	21	15	6	403	1.16	21	74.54%
28	**Strategic Alliance**	Strategy/Organization	1982	1995-1999	28	15	13	1861	40.15	28	63.82%
29	**Virtual Corporation**	Strategy/Organization	1992	1990-1994	18	20	0	127	2.76	18	96.31%
30	**Core Competences**	Strategy/Organization	1965	1995-1999	45	15	30	6777	32.27	21	70.75%
31	**ISO 9000**	Production	1988	1995-1999	22	15	7	2723	21.78	25	65.56%
32	**Outsourcing**	Strategy/Organization	1982	1995-1999	28	15	13	27829	113.67	41	49.43%
33	**Growth Strategies**	Strategy/Organization	1965	1995-1999	45	15	30	4063	48.05	27	52.82%
34	**Six Sigma**	Production	1989	2000-2004	21	10	11	3521	9.34	35	72.40%
35	**Benchmarking**	Strategy/Organization	1972	1995-1999	38	15	23	10256	33.48	36	55.71%
36	**Virtual Team**	HRM	1992	1995-1999	18	15	3	552	3.24	24	61.16%
37	**Scenario Plan**	Strategy/Organization	1980	1995-1999	30	15	15	13	2.08	1	22.50%
38	**Network Organization**	Strategy/Organization	1986	1995-1999	24	15	9	296	7.55	19	58.27%
39	**Mass Customization**	Marketing	1985	1995-1999	25	15	10	942	4.15	26	57.68%
40	**Quality Circle**	Production	1979	1980-1984	31	30	1	561	7.58	23	77.30%
42	**Empowerment**	HRM	1928	1995-1999	82	15	67	4668	100.03	36	63.73%
43	**Collaborative Innovation**	Strategy/Organization	1993	2005-2009	17	5	12	140	0.33	12	50.83%
44	**Shared Service Center**	Strategy/Organization	1993	1995-1999	17	15	2	53	2.06	3	68.86%
45	**Blue Ocean Strategy**	Strategy/Organization	2004	2005-2009	6	5	1	105	1.10	10	47.85%
46	**Loyalty Management**	Marketing	1991	2000-2004	19	10	9	107	0.47	11	59.25%
47	**Agile Strategy**	Strategy/Organization	1995	1995-1999	15	15	0	30	0.12	7	45.45%
48	**Horizontal Corporation**	Strategy/Organization	1993	1990-1994	17	20	0	7	0.19	5	40.00%
49	**Open Market Innovation**	Strategy/Organization	2002	2000-2004	8	10	0	13	0.03	9	80.00%
50	**Consumer Ethnography**	Marketing	2002	2000-2004	8	10	0	1	0.01	0	0.00%
51	**Employee assistance program**	HRM	1976	1990-1994	34	20	14	661	7.61	16	58.55%
52	**Sensitivity training**	HRM	1957	1990-1994	53	20	33	181	2.56	13	41.69%
53	**Job Enrichment**	HRM	1957	1990-1994	53	20	33	129	4.11	21	73.63%
				mean value	**33.36**	**14.81**	**19**	**4154**	**25.55**	**26**	**59.16%**
				median	**30**	**15**	**14**	**2488**	**7.61**	**27**	**59.25%**
				std. deviation	**16.51**	**4.75**	**12**	**5519**	**42.70**	**11**	**15.16%**
				min	**6**	**5**	**1**	**1**	**0.01**	**0**	**0.00%**
				max	**82**	**30**	**52**	**27829**	**265.06**	**42**	**96.31%**

* We can only calculate the approximate takeoff age we captured the takeoff age based on the number of texts on the respective practice in 5 year intervals.

With regard to practice niches we do not observe an equal distribution across the six niches but find that popular organizational practices often address organizational problems on the strategic level. The niche *Strategy/Organization* thereby not only represents the niche with the largest number of members – 21 practices can be classified as falling into this group – it also represents the niche in which the practices receive the highest average attention (average total occurrences = 5141). In addition, organizational practices often address employee related issues such as motivation, leadership and behavior and can thus be subsumed under the niche *Human Resource Management*, representing the second most prominent niche containing 14 practices. Comparing the average age values against the values of the other groups also indicates that employee related practices seem to capture rather "old" management ideas since they show the highest average total age and no new practice has emerged in this group within the last 20 years. Descriptive statistics on the niche level are presented in Table 4.

Table 4: Descriptive statistics on the level of practice niches

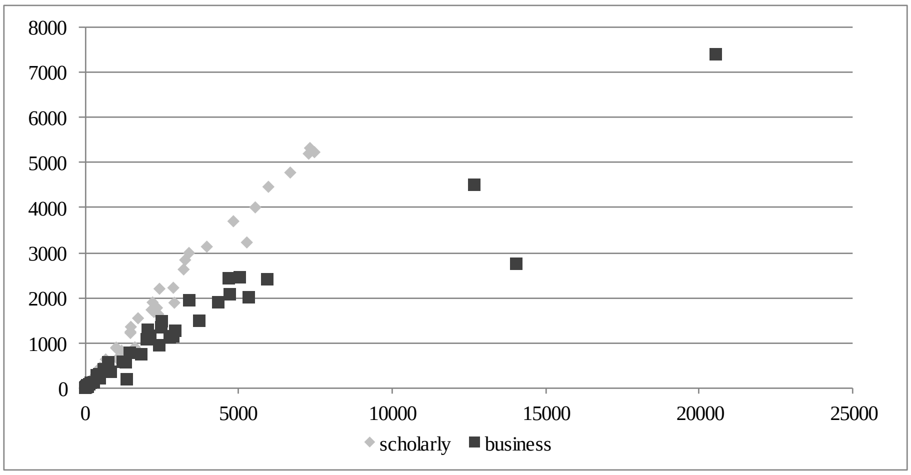
niche	number of practices		total age	approx. takeoff age*	approx. latency phase	total occurrences	popularity (variable)
Strategy/Organization	21	mean	29.38	14.05	18.24	5141	36.44
		std. dev.	16.69	4.26	16.79	7495	61.20
		min	6.00	5.00	0.00	7	0.03
		max	69.00	20.00	54.00	27829	265.06
Production	7	mean	31.00	19.29	11.43	3267	18.57
		std. dev.	9.56	5.62	9.35	2710	15.58
		min	22.00	10.00	1.00	561	2.85
		max	52.00	30.00	32.00	8807	42.88
Marketing	6	mean	31.83	10.00	14.17	2793	12.75
		std. dev.	10.53	2.89	9.26	3679	16.23
		min	13.00	5.00	0.00	1	0.01
		max	45.00	15.00	29.00	9506	37.97
HRM	14	mean	48.71	16.43	23.07	3660	18.66
		std. dev.	24.74	3.50	15.55	3903	25.06
		min	20.00	10.00	3.00	129	1.16
		max	101.00	20.00	67.00	13257	100.03
Finance/Controlling	5	mean	46.60	13.00	24.20	4269	24.22
		std. dev.	29.45	2.45	19.55	3114	16.79
		min	18.00	10.00	4.00	188	1.77
		max	89.00	15.00	55.00	9605	42.63

Connectedness of practices across social contexts

To refine our understanding of the practices addressed in this study, for each practice we also capture the *degree of connection* to co-existing practices while differentiating between the two social contexts academia and business press. We thereby considered two indicators of practice connection: First, the *number of practices* each focal practice is jointly discussed with and, second, the *co-*

occurrence/occurrence ratio as indicated by the ratio between the number of texts in which a practice is jointly discussed with other practices (co-occurrences) and the total number of texts discussing the practice (occurrences). We thereby observe striking differences between the two spheres (for an overview see also appendix 3). An average practice is jointly discussed with 36 (out of 52 possible) co-existing practices in academic articles, while this value is less than half as high in business press where we observe an average number of 15 jointly discussed practices. With regard to the second indicator – co-occurrence/occurrence ratio – on an aggregated level we see that in more than three third of academic texts dealing with one of the organizational practices references to other practices can be found, while in business press this is only the case for less than 50% of texts. It is thereby interesting to note that the overall number of occurrences is relatively similar across the two spheres, even slightly higher in business press (100,932 in academia and 119,227 in business press). However, we observe striking differences with regard to the number of texts in which more than one practice is discussed: 76,210 in academia and 48,404 in business press. The differences are thereby not only observable on an aggregated level but seem to be relatively stable over most of the practices: When plotting the total number of texts in which a practice is discussed (occurrences on the x-axis) against the number of texts in which the practice is jointly discussed with one of the other practices (co-occurrences on the y-axis), we see that the graph showing the values in academia is always above the graph indicating the co-occurrence/occurrence ratio in business press (Figure 3).

Figure 3: Occurrences (x-axis) vs. co-occurrence (y-axis) in academia and business press

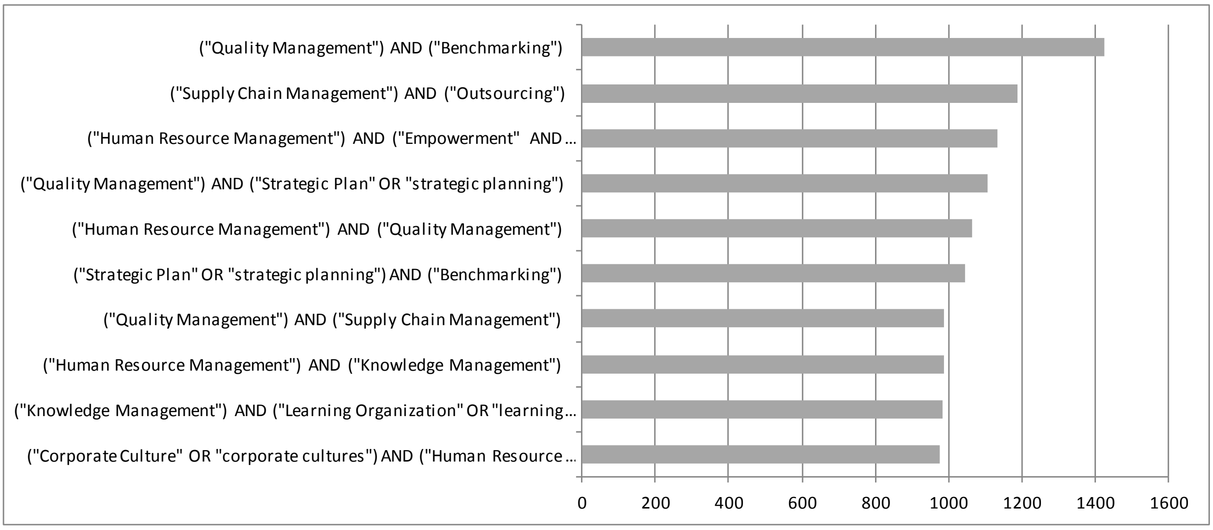


These observations indicate that authors of business press articles rather tend to discuss single practices in texts than to combine two or more practices in the texts they produce. Different from that, we observe a much stronger tendency to combine practices in texts produced in the academic context. However, differences especially seem to exist with regard to the level of co-occurrences. This means that they do not seem to result from single practices or practice combinations but observable differences seem to hold for most of the practices in our dataset. Taken together, we find some support for the proposition that different theorizers are bound to different social contexts and that these differences should be to some extent reflected in the texts they produce. Despite these insights with regard to existing similarities on the level of single practices between the two spheres, the question remains unanswered whether similarities or differences will be more striking when moving to the level of investigation that is of major interest for our study: the co-occurrence. This question will be empirically addressed in the following.

Descriptive statistics: Co-Occurrences

Table 5 shows descriptive statistics for our dataset of co-occurrences in academic articles. Considering our dependent variable (*Co-occurrences*), across all 1,378 possible combinations of two practice labels, we find that two practices are on average jointly discussed in 81 texts, while we observe a rather high standard deviation of 172. The highest number of co-occurrences we observe is 1,426 for the pair or practices Quality Management and Benchmarking. The practice Quality Management generally seems to be an important linking point for other practices: When looking at the top 10 pairs of practice labels according to the number of co-occurrences, we count 4 pairs in which one of the practices is Quality Management (see Figure 4). For 312 (approx. 23 percent) out of the 1378 theoretically possible concept pairs in academic articles, we do not find any text in which the respective pair of labels co-occurred.

Figure 4: Top 10 pairs of practice labels according to co-occurrences in academia



With respect to correlations between the dependent (*co-occurrences*) variable and independent variables, we are able to make some initial observations that correspond to our theoretically derived propositions on co-occurrence patterns. We observe a positive and highly significant (.000) correlation between the number of co-occurrences and the popularity difference of two practices, indicating that – in line with our expectations (proposition 1) – with an increasing difference in popularity, chances that two practices are jointly discussed in one text increase significantly. Again in line with our expectations, we observe a negative and significant correlation between the number of co-occurrences and the age difference (both *total age difference* and *takeoff age difference*) of two practices, indicating that theorizers will rather combine two practices that emerged or were prominent at roughly the same point in time. The same holds true for the correlation between co-occurrences and our binary variable *different practice groups*: In line with proposition 3, practice labels stemming from different practice groups co-occur significantly (.005) less often than those stemming from the same group. Nevertheless, looking at our detailed assessment of co-occurrence patterns within and across practice groups (variables 7 to 16), we find some exceptions from this larger trend: While the tendency to rather combine practices from the same group holds true for a number of practice groups (like e.g. Finance and Marketing, Human Resources Management and Marketing, Production and Strategy/Organization), we also observe groups across which theorizers strongly combine practices (like e.g. HRM and Production, Production and Strategy/Org).

Table 6 displays descriptive statistics for our dataset of co-occurrences in business press articles. Interestingly and in line with our observation outlined above that co-occurrences seem to be more prevalent in academia, we observe that across all possible pairs of practices, on average we find only about 24 texts in which two practice labels are combined in business press articles (compared to an average number of about 81 texts in academia). In business press articles, the highest number of texts in which we find co-occurrences of one single practice pair is 1,513 (compared to 1,426 in academia) and results from joint discussions of the two practices Lean Production and Six Sigma. Again we identify the top 10 list of most often co-occurring practices (see Figure 5) and the practice that can be found most often in this list is Outsourcing: in 6 out 0f these 10 pairs of labels one of them is Outsourcing. Again, by looking at correlations between our dependent variable and independent variables, we find initial support for most of our expectations – at least based on simple bivariate statistics. In order to assess whether these results bear up against a more thorough multivariate assessment, the following section is devoted to testing our propositions using linear regression models.

Figure 5: Top 10 pairs of practice labels according to co-occurrences in business press

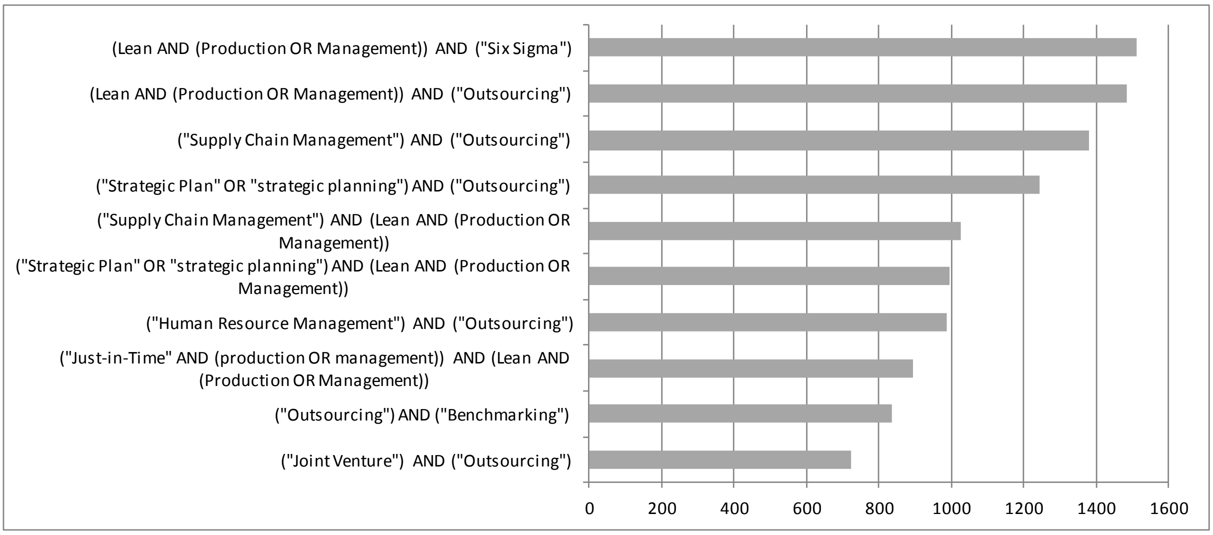


Table 5: Descriptive statistics academia (n = 1378)

	Mean/No.	S.D.	Min	Max	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18
-1 Co-Occurrences	81.295	172.774	0.000	1426.000	1.000																	
-2 Popularity difference	34.578	50.228	0.015	265.045	0.101	1.000																
					0.000																	
-3 Popularity difference sq.	3716.667	11790.187	0.000	70248.781	0.037	0.931	1.000															
					-0.165	0.000																
-4 Total age difference	18.530	14.608	0.000	76.000	-0.055	0.435	0.343	1.000														
					-0.041	0.000	0.000															
-5 Takeoff age difference	1.010	0.907	0.000	5.000	-0.100	-0.138	-0.091	-0.026	1.000													
					0.000	0.000	-0.001	-0.327														
-6 Different practice groups (0/1)	0.747	0.435	0.000	1.000	-0.075	-0.083	-0.072	-0.025	0.091	1.000												
					-0.005	-0.002	-0.008	-0.355	-0.001													
-7 Finance and HRM	0.051	0.220	0.000	1.000	-0.007	-0.052	-0.054	0.037	-0.039	0.135	1.000											
					-0.785	-0.052	-0.043	-0.169	-0.148	0.000												
-8 Finance and Marketing	0.018	0.134	0.000	1.000	-0.049	-0.035	-0.035	0.010	-0.037	0.079	-0.031	1.000										
					-0.070	-0.190	-0.200	-0.712	-0.164	-0.003	-0.243											
-9 Finance and Production	0.029	0.168	0.000	1.000	0.004	-0.055	-0.047	-0.008	0.060	0.101	-0.040	-0.024	1.000									
					-0.888	-0.041	-0.084	-0.765	-0.026	0.000	-0.138	-0.383										
-10 Finance and Strategy/Org	0.076	0.265	0.000	1.000	-0.014	0.024	0.011	0.051	-0.091	0.167	-0.066	-0.039	-0.050	1.000								
					-0.615	-0.378	-0.677	-0.057	-0.001	0.000	-0.014	-0.147	-0.065									
-11 HRM and Marketing	0.051	0.220	0.000	1.000	-0.073	-0.072	-0.055	0.028	0.085	0.135	-0.054	-0.031	-0.040	-0.066	1.000							
					-0.006	-0.008	-0.041	-0.290	-0.002	0.000	-0.047	-0.243	-0.138	-0.014								
-12 HRM and Production	0.081	0.273	0.000	1.000	0.072	-0.080	-0.071	-0.057	0.026	0.173	-0.069	-0.040	-0.051	-0.085	-0.069	1.000						
					-0.007	-0.003	-0.008	-0.036	-0.336	0.000	-0.011	-0.134	-0.056	-0.002	-0.011							
-13 HRM and Strategy/Org	0.213	0.410	0.000	1.000	-0.030	0.047	0.043	0.051	-0.080	0.303	-0.120	-0.071	-0.090	-0.150	-0.120	-0.155	1.000					
					-0.263	-0.083	-0.110	-0.057	-0.003	0.000	0.000	-0.009	-0.001	0.000	0.000	0.000						
-14 Marketing and Production	0.029	0.168	0.000	1.000	-0.025	-0.053	-0.046	-0.074	0.136	0.101	-0.040	-0.024	-0.030	-0.050	-0.040	-0.051	-0.090	1.000				
					-0.363	-0.051	-0.089	-0.006	0.000	0.000	-0.138	-0.383	-0.267	-0.065	-0.138	-0.056	-0.001					
-15 Marketing and Strategy/Org	0.076	0.265	0.000	1.000	-0.097	0.011	0.025	-0.038	0.033	0.167	-0.066	-0.039	-0.050	-0.082	-0.066	-0.085	-0.150	-0.050	1.000			
					0.000	-0.688	-0.357	-0.163	-0.221	0.000	-0.014	-0.147	-0.065	-0.002	-0.014	-0.002	0.000	-0.065				
-16 Production and Strategy/Org	0.122	0.327	0.000	1.000	0.053	0.024	0.016	-0.067	0.130	0.217	-0.086	-0.051	-0.064	-0.107	-0.086	-0.111	-0.194	-0.064	-0.107	1.000		
					-0.051	-0.382	-0.541	-0.012	0.000	0.000	-0.001	-0.060	-0.017	0.000	-0.001	0.000	0.000	-0.017	0.000			
-17 Popularity difference x Different practice groups (0/1)	24.017	42.816	0.000	265.045	0.076	0.734	0.674	0.320	-0.068	0.327	-0.004	-0.008	-0.022	0.099	-0.027	-0.021	0.183	-0.019	0.084	0.120	1.000	
					-0.005	0.000	0.000	0.000	-0.011	0.000	-0.876	-0.769	-0.413	0.000	-0.312	-0.447	0.000	-0.479	-0.002	0.000		
-18 Total age difference x Different Practice groups (0/1)	13.679	14.923	0.000	76.000	-0.086	0.230	0.166	0.717	0.032	0.534	0.112	0.054	0.048	0.144	0.103	0.041	0.220	-0.016	0.057	0.055	0.496	1.000
					-0.001	0.000	0.000	0.000	-0.238	0.000	0.000	-0.045	-0.073	0.000	0.000	-0.125	0.000	-0.553	-0.036	-0.040	0.000	
-19 Takeoff age difference x Different practice groups (0/1)	0.790	0.915	0.000	5.000	-0.107	-0.125	-0.089	-0.030	0.799	0.503	0.017	-0.005	0.101	-0.021	0.140	0.097	0.046	0.177	0.102	0.219	0.067	0.252
					0.000	0.000	-0.001	-0.272	0.000	0.000	-0.530	-0.867	0.000	-0.439	0.000	0.000	-0.089	0.000	0.000	0.000	-0.013	0.000

Table 6: Descriptive statistics business press (n = 2756)

	Mean/No.	S.D.	Min	Max	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18
-1 Co-Occurrences	23.909	67.003	0.000	783.000	1.000																	
-2 Popularity difference	34.578	50.219	0.015	265.045	0.143	1.000																
					0.000																	
-3 Popularity difference sq.	3716.667	11788.047	0.000	70248.781	0.075	0.931	1.000															
					0.000	0.000																
-4 Total age difference	18.530	14.606	0.000	76.000	-0.043	0.435	0.343	1.000														
					-0.022	0.000	0.000															
-5 Takeoff age difference	1.010	0.907	0.000	5.000	-0.083	-0.138	-0.091	-0.026	1.000													
					0.000	0.000	0.000	-0.165														
-6 Different practice groups (0/1)	0.747	0.435	0.000	1.000	-0.085	-0.083	-0.072	-0.025	0.091	1.000												
					0.000	0.000	0.000	-0.191	0.000													
-7 Finance and HRM	0.051	0.220	0.000	1.000	-0.007	-0.052	-0.054	0.037	-0.039	0.135	1.000											
					-0.712	-0.006	-0.004	-0.052	-0.041	0.000												
-8 Finance and Marketing	0.018	0.133	0.000	1.000	-0.038	-0.035	-0.035	0.010	-0.037	0.079	-0.031	1.000										
					-0.045	-0.064	-0.070	-0.601	-0.049	0.000	-0.099											
-9 Finance and Production	0.029	0.168	0.000	1.000	0.004	-0.055	-0.047	-0.008	0.060	0.101	-0.040	-0.024	1.000									
					-0.836	-0.004	-0.015	-0.673	-0.002	0.000	-0.036	-0.217										
-10 Finance and Strategy/Org	0.076	0.265	0.000	1.000	0.010	0.024	0.011	0.051	-0.091	0.167	-0.066	-0.039	-0.050	1.000								
					-0.614	-0.212	-0.556	-0.007	0.000	0.000	0.000	-0.040	-0.009									
-11 HRM and Marketing	0.051	0.220	0.000	1.000	-0.062	-0.072	-0.055	0.028	0.085	0.135	-0.054	-0.031	-0.040	-0.066	1.000							
					-0.001	0.000	-0.004	-0.135	0.000	0.000	-0.005	-0.099	-0.036	0.000								
-12 HRM and Production	0.081	0.273	0.000	1.000	-0.004	-0.080	-0.071	-0.057	0.026	0.173	-0.069	-0.040	-0.051	-0.085	-0.069	1.000						
					-0.839	0.000	0.000	-0.003	-0.173	0.000	0.000	-0.034	-0.007	0.000	0.000							
-13 HRM and Strategy/Org	0.213	0.410	0.000	1.000	-0.044	0.047	0.043	0.051	-0.080	0.303	-0.120	-0.071	-0.090	-0.150	-0.120	-0.155	1.000					
					-0.020	-0.014	-0.024	-0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
-14 Marketing and Production	0.029	0.168	0.000	1.000	-0.025	-0.053	-0.046	-0.074	0.136	0.101	-0.040	-0.024	-0.030	-0.050	-0.040	-0.051	-0.090	1.000				
					-0.196	-0.006	-0.016	0.000	0.000	0.000	-0.036	-0.217	-0.117	-0.009	-0.036	-0.007	0.000					
-15 Marketing and Strategy/Org	0.076	0.265	0.000	1.000	-0.071	0.011	0.025	-0.038	0.033	0.167	-0.066	-0.039	-0.050	-0.082	-0.066	-0.085	-0.150	-0.050	1.000			
					0.000	-0.570	-0.193	-0.049	-0.084	0.000	0.000	-0.040	-0.009	0.000	0.000	0.000	0.000	-0.009				
-16 Production and Strategy/Org	0.122	0.327	0.000	1.000	0.068	0.024	0.016	-0.067	0.130	0.217	-0.086	-0.051	-0.064	-0.107	-0.086	-0.111	-0.194	-0.064	-0.107	1.000		
					0.000	-0.216	-0.387	0.000	0.000	0.000	0.000	-0.008	-0.001	0.000	0.000	0.000	0.000	-0.001	0.000			
-17 Popularity difference x Different practice groups (0/1)	24.017	42.809	0.000	265.045	0.112	0.734	0.674	0.320	-0.068	0.327	-0.004	-0.008	-0.022	0.099	-0.027	-0.021	0.183	-0.019	0.084	0.120	1.000	
					0.000	0.000	0.000	0.000	0.000	0.000	-0.825	-0.678	-0.247	0.000	-0.152	-0.281	0.000	-0.317	0.000	0.000		
-18 Total age difference x Different Practice groups (0/1)	13.679	14.920	0.000	76.000	-0.077	0.230	0.166	0.717	0.032	0.534	0.112	0.054	0.048	0.144	0.103	0.041	0.220	-0.016	0.057	0.055	0.496	1.000
					0.000	0.000	0.000	0.000	-0.095	0.000	0.000	-0.005	-0.011	0.000	0.000	-0.030	0.000	-0.402	-0.003	-0.004	0.000	
-19 Takeoff age difference x Different practice groups (0/1)	0.790	0.915	0.000	5.000	-0.098	-0.125	-0.089	-0.030	0.799	0.503	0.017	-0.005	0.101	-0.021	0.140	0.097	0.046	0.177	0.102	0.219	0.067	0.252
					0.000	0.000	0.000	-0.120	0.000	0.000	-0.375	-0.813	0.000	-0.273	0.000	0.000	-0.016	0.000	0.000	0.000	0.000	0.000

Table 7: Regression models for academic discourse; dependent variable: Co-occurrences

		academia							
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Leverage	Popularity difference	1.722***	2.200***	2.099***	2.079***	2.028***	1.875***	2.079***	2.082***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	Popularity difference sq.	-0.006***	-0.007***	-0.007***	-0.007***	-0.007***	-0.007***	-0.007***	-0.007***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Differentiation	Total age difference		-1.895***	-1.845***	-1.837***	-1.746***	-1.827***	-1.799***	-1.839***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.006)	(0.000)
	Takeoff age difference			-12.208**	-11.326**	-12.572**	-11.405**	-11.329**	-9.268
				(0.016)	(0.026)	(0.016)	(0.025)	(0.026)	(0.374)
Embedment	Different practice groups (0/1)				-23.018**		-33.652***	-22.073	-20.569
					(0.028)		(0.008)	(0.196)	(0.172)
Embedment (detail)	Finance and HRM					-16.254			
						(0.458)			
	Finance and Marketing					-74.265**			
						(0.032)			
	Finance and Production					0.431			
						(0.988)			
	Finance and Strategy/Org					-29.468			
						(0.112)			
	HRM and Marketing					-51.937**			
						(0.019)			
	HRM and Production					29.084			
						(0.110)			
	HRM and Strategy/Org					-28.724**			
						(0.029)			
	Marketing and Production					-33.711			
						(0.232)			
	Marketing and Strategy/Org					-74.460***			
						(0.000)			
	Production and Strategy/Org					3.937			
						(0.804)			
Interaction effects	Popularity difference x						0.277		
	Different practice groups (0/1)						(0.145)		
	Total age difference x Different							-0.050	
	Practice groups (0/1)							(0.944)	
	Takeoff age difference x								-2.675
	Different practice groups (0/1)								(0.821)
	Constant	45.105***	67.747***	81.558***	98.309***	98.580***	106.190***	97.597***	96.482***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	Observations	1,378	1,378	1,378	1,378	1,378	1,378	1,378	1,378
	Adjusted R-squared	0.033	0.053	0.056	0.059	0.074	0.059	0.058	0.058

pval in parenthes

*** p<0.01, ** p<0.05, * p<0.1

Table 8: Regression models for business press discourse; dependent variable: Co-occurrences

						business				
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Leverage	Popularity difference		0.727***	0.923***	0.899***	0.890***	0.867***	0.782***	0.891***	0.891***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	Popularity difference sq.		-0.002***	-0.003***	-0.003***	-0.003***	-0.003***	-0.003***	-0.003***	-0.003***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Differentiation	Total age difference			-0.774***	-0.763***	-0.759***	-0.735***	-0.754***	-0.902***	-0.760***
				(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	Takeoff age difference				-2.910**	-2.517*	-2.981**	-2.559*	-2.505*	-1.516
					(0.035)	(0.069)	(0.036)	(0.064)	(0.070)	(0.593)
Embedment	Different practice groups (0/1)					-10.251***		-15.886***	-13.766***	-9.059**
						(0.000)		(0.000)	(0.003)	(0.027)
Embedment (detail)	Finance and HRM						-6.154			
							(0.304)			
	Finance and Marketing						-23.315**			
							(0.014)			
	Finance and Production						-0.434			
							(0.955)			
	Finance and Strategy/Org						-6.651			
							(0.190)			
	HRM and Marketing						-17.319***			
							(0.004)			
	HRM and Production						-6.325			
							(0.203)			
	HRM and Strategy/Org						-13.904***			
							(0.000)			
	Marketing and Production						-14.908*			
							(0.053)			
	Marketing and Strategy/Org						-24.089***			
							(0.000)			
	Production and Strategy/Org						2.218			
							(0.609)			
Interaction effects	Popularity difference x Different practice groups (0/1)							0.147***		
								(0.005)		
	Total age difference x Different Practice groups (0/1)								0.187	
									(0.338)	
	Takeoff age difference x Different practice groups (0/1)									-1.302
										(0.686)
	media==mag	0.887	0.887	0.887	0.887	0.887	0.887	0.887	0.887	0.887
		(0.728)	(0.722)	(0.719)	(0.719)	(0.719)	(0.717)	(0.718)	(0.719)	(0.719)
	Constant	23.466***	7.446***	16.699***	19.991***	27.451***	27.909***	31.627***	30.098***	26.562***
		(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	Observations	2,756	2,756	2,756	2,756	2,756	2,756	2,756	2,756	2,756
	Adjusted R-squared	-0.000	0.044	0.066	0.067	0.071	0.079	0.074	0.071	0.071

pval in parenthes

*** p<0.01, ** p<0.05, * p<0.1

2.4.3 Quantitative analysis: Regression models

We test the above expectations applying linear regression models.[7] Regression results for academia are displayed in Table 7. In model 1, we test for the influence of *popularity difference* between practices on the chances with which they co-occur. We thereby added both the unmodified and the squatted term and observe significant effects for both variables. The significant positive effect of *popularity difference* and the significant negative effect of the *popularity difference squared* thereby indicate an inverted u-shaped relationship between the popularity difference of two practices and their co-occurrence. Put differently, authors of academic articles rather combine two practices within one article that differ with respect to their popularity but this effect decreases for very high popularity differences. This finding both supports and details *hypothesis 1.* The curvilinear effect may thereby indicate that potential leverage effects are perceived to decrease when the popularity distance of a practice pair reaches a level at which comparisons become unreasonable.

In model 2 and 3, we successively include the two variables indicating age differences between practices and observe significant negative effects for both *total age difference* and *takeoff age difference*. Practices are significantly more often discussed with other practices that both emerge and that take off at the same time. These observations support our expectation that due to an increased competition between practices of about the same age, theorizers in the academic context aim to differentiate these strongly competing practices from each other and thus jointly discuss them in the texts they producers. We thus find support for *hypothesis 2.*

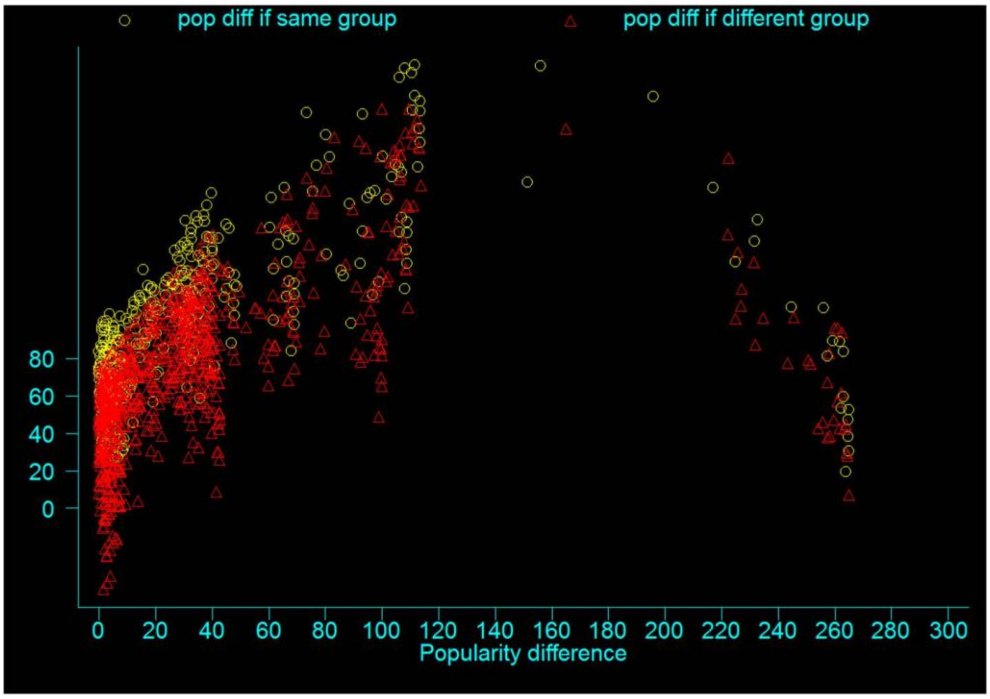
In the next step we include the binary variable indicating whether the two co-occurring practices belong to *different practice groups*. In line with hypothesis 3 we observe in model 4 that two practices from different groups co-occur significantly less often than two practices from the same group. In order to have a closer look at the effects of these content-based relationships, we included binary variables coding for which groups are combined in each co-occurrence in an alternative model 5. What we see is that the overall group effect holds true for most group combinations with regard to direction

[7] We have also conducted tobit regression models while controlling for the year of observation since our dependent variable is a count variable, left censored by zero (Tobin, 1958). We thereby observe the same results as for OLS models and thus chose to report the results of OLS modles since coefficients are better interpretable in these models.

and for several category combinations this effect is also significant. The tendency to combine practices within groups rather than between groups thus does not seem to be arbitrary, but holds true for various group combinations, strengthening the above arguments. One exception to the norm is that HRM practices and Production practices are jointly discussed more often than with other practices from the respective groups, while the effect is slightly below significance. This observation might be partly explained by the general trend to take behavioral and motivational aspects into account when – for instance – developing manufacturing designs and, thus, developing production practices. When promoting an upcoming production practice, theorizers might thus embed this new practice in the discourse on HRM practice by displaying how it is compatible with existing norms considering the role of employees. Despite this exception, our overall results support *hypothesis 3*.

Arguing that both the leverage and the differentiation mechanism should vary in strength between practices from the same niche and practices from different niches, we include the respective interaction effects in models 6 to 8. Considering the leverage effect we observe positive effects for both the *popularity difference* and the interaction effect (*popularity difference x different practice groups*) while the latter is slightly below significance. Our results indicate that the effect size of popularity difference increases more strongly for practices from different groups. With increasing differences in the practices' popularities the frequency with which two practices co-occur increases more strongly for practices from different categories. This is also visible from the plot as displayed below (Figure 6; x-axis shows popularity difference, y-axis shows estimated co-occurrences). We can interpret these observations as follows: Generally, two practices belonging to different groups co-occur less often. However, when a practice is linked to a second practice form a different group, this co-occurrence requires stronger leverage efforts. In order to link a practice to a deviant practice, a particularly prominent "docking station" is chosen. Put differently, for very large popularity differences – where co-occurrences in general are less frequent as indicated by the significant effect of the squared popularity difference – content-based relationships seem to become obsolete. They do matter for "normal" - meaning small and modest - popularity differences. These observations are thus in line with *hypothesis 5*.[8]

Figure 6: Interaction effect between popularity difference and different practice group in academic discourse



With regard to the interaction between the age variables and the variable different practice groups we observe that the coefficients of the major effects (total age difference and takeoff age difference) are negative and significant while the coefficients of the interaction effects (*total age difference x different practice groups* and *takeoff age difference and different practice groups*) have positive signs. These results suggest that the size of the age difference effect is larger for practices form the same group. That is to say, with increasing age differences, co-occurrence frequency decreases more strongly for practices from the same group. This observation would be in line with the idea that competition is stronger between two practices stemming from the same group than between practices from two different groups. Concepts thus have to be more strongly differentiated from other practices that emerge from the same time frame, when they are similar with regard to their basic content. However,

[8] Despite the observed significant effects, the relatively small adjusted R2 might be of concern for some readers. However, it has been shown that correctly specified models may have a low R2 (McGuirk & Driscoll, 1995). Results have been shown to be substantively important despite very low R2 in various contexts such as social studies (Van Laningham, Johnson, & Amato, 2001) or the area of finance (Ferson, Sarkissian, & Simin, 2003) and it is generally argued that an R2 smaller than ten percent is commonplace in social and political science (Freedman, 2009). It is thus often argued that "it is generally conceded among insiders that they [the R2 and adjusted R2] do not mean a thing" (Cramer, 1987, p. 253).

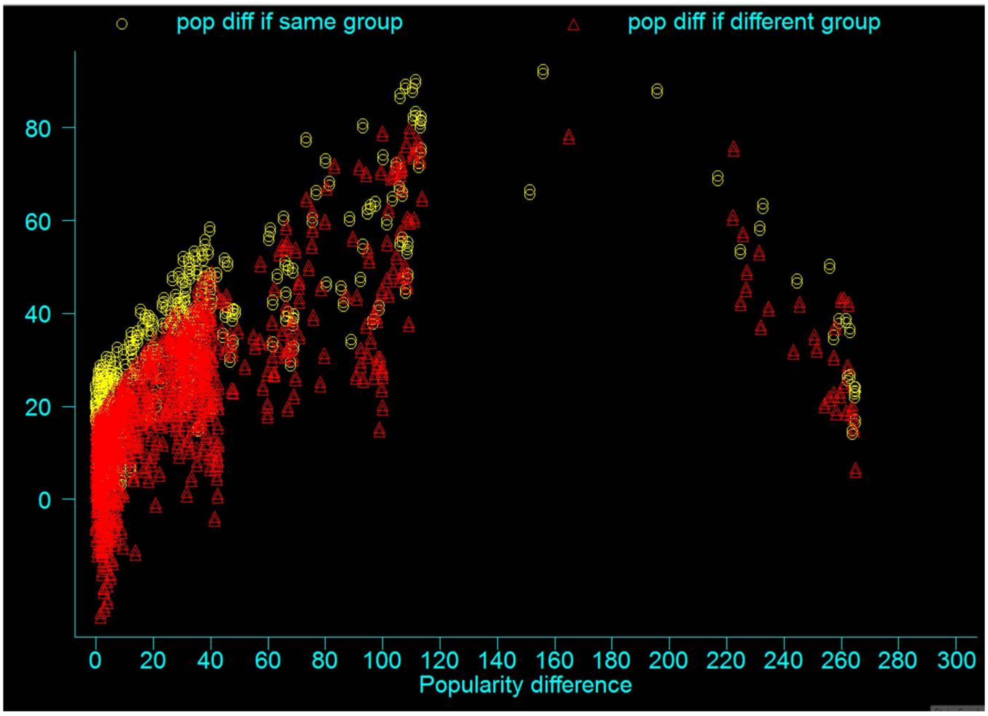
this is just a slight tendency based on the interaction effects' signs since the effects for both age differences variables are far from being significant. We thus find only very limited support for *hypothesis 5*.

In Table 8 we display the regression results as observable in the business press context. Generally, we observe the same effects as in academia with regard to direction and significance. Differences can be identified when it comes to effect sizes, which are generally smaller in business press models. These differences can partly be explained by the fact that practices are in general less often jointly discussed with other practices in business press (compare coefficients of constants) – as already indicated in the descriptive statistics – resulting in a lower mean and variation of the dependent variable that might be explained by independent variables. One other difference in these models is that we consider two types of media in order to capture discourse on organizational practices in business press – namely trade journals and magazines – but we do not observe significant differences between these two types of media. In addition, in the business press discourse we also observe that the effect size of popularity difference increases more strongly for practices from different groups than for practices from the same groups (see Figure 7). This effect seems to be stronger in business press that in the academic discourse since now the effects of both the *popularity difference* and the interaction effect (*popularity difference x different practice groups*) are significant. For theorizers in the business press context it thus seems to be more common to link an upcoming focal practice to a very prominent practice belonging to a different group than for academics.

Our results indicate that the effect size of popularity difference increases more strongly for practices from different groups. With increasing differences in the practices' popularities the frequency with which two practices co-occur increases more strongly for practices from different categories. This is also visible from the plot as displayed below (Figure 7; x-axis shows popularity difference, y-axis shows estimated co-occurrences).

Taken together, we find support for the three mechanisms driving theorization processes – namely leverage, differentiation and embedment – as expected in hypotheses 1 to 3. In addition, our results point to existing variations within and across practice niches: our results are in line with hypothesis 4 but we find only limited support for hypothesis 5. As described above, we thereby observe a stronger effect in the business press context with regard to hypothesis 4. Although differences can be observed with regard to the total number of observable co-occurrences – co-occurrences seem to be generally more common in academia than in business press – we do not find differences between the two contexts when it comes to the three theorization mechanisms. Considering that the same effects are observable with regard to significance, that changes in the R squared between individual models are very similar, and that the relations between coefficients of observable effects within single models are very similar across contexts, we would conclude that, in opposition to our expectations formulated in hypotheses 6 and 7, theorization processes seem to follow very similar patterns in both contexts.

Figure 7: Interaction effect between popularity difference and different practice group in business press discourse



2.5 Discussion

2.5.1 Summary

The major interest of this study is to investigate mechanisms of management knowledge production and change and by this means to develop an understanding of „the process by which a spatially or historically defined field defines what counts as knowledge […] and what does not" (Meyer R. , 2008, p. 522). Based on a review of existing literature in this field we have shown that one central question has so far received little attention: How does new management knowledge become connected to the existing stock of established management knowledge? Answering this question requires developing a deeper understanding for the role that existing knowledge plays in the production of new knowledge and for mechanisms which drive such a connection. Existing work addressing this aspect of knowledge production has focused on investigating how single organizational practices as knowledge objects are connected to characteristics of populations of potential adopters (Strang & Meyer, 1993; Kieser A. , 1997) or how these new knowledge objects become aligned with existing sets of norms and values within social contexts (Etzion & Ferraro, 2010; Greenwood, Suddaby, & Hinings, 2002; Fiss & Zajac, 2006). What has thereby largely been neglected is that co-existing organizational practices represent a major part of the social stock of management knowledge and should thus serve as central reference points for upcoming organizational practices. In order to contribute to closing this research gap, we aim to understand how organizational practices are linked to co-existing practices in texts in the attempt of theorizers to change the social stock of management knowledge.

Based on a qualitative and quantitative analysis of co-occurrence patterns of organizational practices we make two major observations: First, in the qualitative part of the study we show that when practices are combined in texts, this frequently contributes to the development of abstract categories and the creation of specified and/or patterned relationships between the co-occurring practices. These observations indicate that the explicit connection of a focal practice to the ecology of co-existing practices seem to be an important facet of theorization that has so far only received limited attention. Second, in our quantitative analysis we are able to identify patterns of co-occurrences that are observable in the academic and business press context which help to understand basic mechanisms underlying the connection of knowledge objects to the existing stock of management knowledge: We find that unpopular practices co-occur significantly more often with more popular co-existing practices than with practices of the same or similar popularity. We also observe that co-existing organizational practices that emerge or take off at the same time period are significantly more often jointly discussed than two practices that emerged or became popular at different points in time. Finally, we observe that the chances of co-occurrence of two practices are higher when they belong to the same niche of practices.

Relating these observations to the underlying mechanisms driving theorization – leverage, differentiation, and embedment – it can be concluded that existing management knowledge objects serve as important reference points for theorization in at least three analytically separate ways: First, existing organizational practices that have gained high degrees of popularity seem to be perceived as important reference points since combining them with less popular practices saves possibilities for achieving legitimacy spillovers. Nevertheless, this relation does not seem to be linear. Existing practices with an extraordinarily high 'distance' in popularity compared to a focal practice seem to be perceived as less viable candidates for achieving legitimacy spillovers – potentially because at a certain point, comparison seems to be perceived as unreasonable. Second, existing practices that have emerged at proximal points in time seem to be seen as important reference points which enable theorizers to differentiate a focal practice from other practices that compete for attention among relevant constituents. Third, the affiliation of existing practices with certain niches in the market for management knowledge that correspond to areas of organizational activity seems to be perceived as relevant since theorization involves the embedment of new knowledge objects into a relevant nodal discourse (Fairclough, 2005). While the embedment of practices in dedicated niches seems to be the rule, especially those practices from other niches that have already achieved high degrees of popularity seem to be perceived as most viable candidates when it comes to combining practices across niches and thus 'violating' this rule.

Serving as docking points for legitimizing, differentiating or embedding new knowledge objects, co-existing knowledge objects may by this means, on the one hand, facilitate the production of new management knowledge. On the other hand, since the existing stock of knowledge "delineates the boundaries and the 'horizon' within which people can meaningfully act – and beyond which it is impossible to see or to understand" (Meyer R. , 2008, p. 521) the need to connect new knowledge objects to this knowledge base also delimits possibilities of knowledge creation. Taken together, we have demonstrated that co-existing organizational practices serve as important linking points for the theorization of upcoming practices and that combining practices in texts constitutes an important and so far understudied aspect of theorization which both enables and delimits the creation of new or modified management knowledge.

2.5.2 *Contributions*

In the following section, we outline how the findings outlined above contribute to existing research on the production and diffusion of management knowledge, specifically with regards to existing work that has assessed processes of theorization and work from the management fashion literature.

Literature of theorization

Existing conceptual models of theorization have provided us with a thorough understanding of how certain rhetorical strategies employed by theorizers might affect diffusion and/or legitimation of organizational practices or forms. Nevertheless, we lack an understanding for upstream social processes that affect the process of theorization itself. How do theorizers choose among a set of available rhetorical devices when developing their arguments? To what extent are theorizers as social actors themselves affected by the social context they are bound to? How to theorizers connect the focal knowledge objects they aim to promote to the existing stock of knowledge? Answering these and related questions is important because it helps to understand those social processes that are at the basis of the perpetuation and modification of social stocks of knowledge within social contexts. The theoretical framework developed in this study extends and details existing conceptual models of theorization and by this means provides a starting point for answering such questions. As a reaction to frequent calls for re-emphasizing the conceptual roots of institutional theory in work from the sociology of knowledge (Meyer R. , 2008), we have conceptualized theorization as social action, thereby explicitly accounting for the fact that theorizers are both dependent on an existing stock of knowledge when producing texts while by this means also contributing to changing this existing knowledge base. This conceptual framework might provide a basis for future research that aims at understanding how the social embedment of theorizers themselves affects the way they promote their ideas.

Besides this rather broad contribution to existing conceptualizations of theorization, our empirical results hold insights that might contribute to existing research at the intersection of research on theorization and the diffusion of management knowledge: One core argument in theorization research is that in order to diffuse, management knowledge has to become aligned with existing norms of appropriateness and rationality (Greenwood, Suddaby, & Hinings, 2002). However, only few studies have started to systematically assess how new management knowledge becomes aligned to the stock of existing management knowledge which – as we argue – represents one important area in which norms of appropriateness and rationality are encapsulated. The results of this study contribute to answering this question and by this means provide a deeper understanding of how theorization contributes to the creation and change of management knowledge. Taking this perspective, our study differs from existing and recent research in which theorization processes surrounding single practices and forms in specific contexts are investigated (Etzion & Ferraro, 2010; Green, Li, & Nohria, 2009; Fiss & Zajac, 2006; Greenwood, Suddaby, & Hinings, 2002). By this means we respond to Strang and Meyers' (1993) and Strang and Soule’s (1998) so far rather unheard calls for examining different, "more and less "modern" practices, or more or less theoretically privileged practices" (Strang & Meyer, 1993, p. 505) and to “place mutually evolving innovations in relation to each other rather than [to] analyze them seriatim (Strang & Soule, 1998, p. 285). More precisely, we are able to show that connecting new management knowledge to an ecology of existing management knowledge by combining practices in texts is not only a phenomenon that can be observed in a significant amount of texts dealing with organizational practices, but also that certain social mechanisms of management knowledge production drive which knowledge objects are combined. When knowledge objects are combined by theorizers, our results indicate that these connections are motivated by an attempt to initiate legitimacy spillovers from established to upcoming knowledge objects; that they may be driven by the idea to differentiate an emerging knowledge object from other emerging knowledge objects, and that they may be lead by the objective to embed a focal knowledge object in the respective nodal discourse, potentially increasing acceptance among relevant audiences.

Understanding these basic mechanisms of combination is – as we argue – a major premise for understanding how new management knowledge is created and established through theorization, because whether theorizers find the ‘right’ ways of connecting new knowledge to the stock of existing knowledge will be critical when it comes to reach and persuade a desired audience. The theoretically derived and empirically tested mechanisms of joint theorization we have developed – namely leverage, differentiation and embedment – thus contribute to a more thorough understanding of theorization as a concept and as a phenomenon which has itself been blamed for currently being “sketchy because little empirical work exists” (Greenwood, Suddaby, & Hinings, 2002, p. 75).

More precisely, future research that aims at understanding the relationship between processes of theorization and material diffusion of organizational practices might profit from our conceptual framework since it helps to derive expectations on how the connection of new management knowledge to the stock of existing management knowledge at one point in time might affect its subsequent acceptance and implementation among organizations. Since we have analyzed practices that have reached considerable attention within the last decades, it can be argued that the acts of joint theorization we observe in this study in total are part of rather successful ‘theorization projects’ and might thus help to understand characteristics of effective theorization. In this view, our findings indicate that typical patterns of connecting a new knowledge object to the existing stock of knowledge might exist which enhance the chances that the new knowledge object becomes accepted and legitimated. In view of our results, we would thus expect that the chances of a focal practice to become a legitimate part of the stock of management knowledge increase under the following circumstances: when an upcoming practice is linked to more established and legitimate practices and thus profits from these practices’ legitimacy, when theorizers make clear how it is different from – potentially superior to – other practices being promoted at the same time period, and when it is embedded in the respective niche by, for instance, displaying how it complements the dominant practice in that niche. Future research could test these propositions.

Literature on the market for management knowledge

Our results also speak to a prominent stream of research that has conceptualized the ebb and flow of popular organizational practices as driven by a market for management knowledge (Sahlin & Wedlin, 2008). Abrahamson and others have argued that establishment and decline of the products in this market – namely organizational practices – is mainly triggered by two types of forces: First, exogeneous forces resulting from major environmental changes which trigger the development of management fashion niches through pushing certain topics “to the top of many fashion consumers' agendas” by linking them “to organizational performance gaps that management techniques could eliminate" (Abrahamson & Fairchild, 1999, p. 714). Second, endogenous forces like competition between practices within niches that help to explain why the "downswing in one management fashion in a management fashion niche coincides with the upswing of the next fashion in that niche" (ibid: 713). Although these conceptual arguments indicate that understanding markets for management knowledge requires assessing larger numbers of practices from different niches and their interaction at single points in time, existing research has so far mainly concentrated on analyzing the development of single niches and/or waves of successive fashions. As Sahlin-Andersson and Engwall (2002, p. 285) have pointed out, "the expansion of management knowledge involves waves of fashion, but the self-sustaining character of this expansion suggests that it is more important to focus on the driving forces that give rise to and *link fashion waves with each other*" (italics added). Potential endogeneous forces triggering changes in markets for management knowledge stemming from competition, content-based overlaps or other relationships between practices across niches and at single points in time have thus received only limited attention. Two observations that we were able to make in this study contribute to clarifying this aspect.

First, as described above, our results indicate that theorizers tend to connect a focal practice to other, more established practices in the market, irrespective of niche barriers. Arguably, such connections contribute to the acquisition of legitimacy for the less popular practice. Conversely, from the perspective of the more prominent practices it can be argued that representing a favored reference point for being connected to other practices strengthens their prominent market position, meaning that prominence might be considered as having a self-reinforcing effect. However, we observe that the popularity difference between practices has a curvilinear effect on their co-occurrence meaning that extraordinarily prominent practices seem to be perceived as less viable candidates for co-mentioning. At a certain point, the self-reinforcing effect of prominence might thus heavily start to decline since theorizers of other practices refuse to connect upcoming practices to other practices with extraordinarily high levels of prominence. This empirical observation might contribute to answering the question why practices which have reached extraordinarily high levels of popularity frequently experience a sudden and rapid popularity decline in discourses and are replaced by other practices (Kieser, 1997; Abrahamson, 1996).

Second, the market for management knowledge has been described as segmented according to areas of practice application within organizations. Following the market-related metaphor, organizational practices have been described as representing cultural products which capture knowledge on how to resolve typical organizational problems within specific niches in that market (Clark, 2004; Abrahamson, 1996). In line with proponents of this stream of research we argue and show empirically that niches represent important frames of reference when it comes to knowledge creation – we observe that practices belonging to the same niche co-occur significantly more often than practices from different groups. However, we also observe that when niche barriers are 'crossed' by theorizers, they tend to choose a specifically legitimate reference point – namely popular rather than unpopular practices from other niches. This indicates that especially when gaining a high degree of popularity within one niche, knowledge objects can become interdisciplinary accepted and understood. Examples for such an outcome of high popularity levels in one niche might be practices that have achieved wide-scale diffusion over a wide range of areas of application, such as the "Lean" idea. "Lean" ideas have spread from the area of production across industries and organizational areas: e.g. Lean Production, Lean Management, Lean Administration, Lean Thinking, Lean Innovation, Lean medical care, Lean hospital, Lean blood supply chain. We thus to some extent confirm but also refine existing research with regard to the role of niches in the market for management knowledge by showing that interaction patterns of knowledge objects across market niches are in fact observable and contribute to explaining processes of knowledge production in this market.

Besides our refinements concerning niches in the market for management knowledge, our results contribute to gaining a deeper understanding for the role of different participants in this market. A major interest in research on the market for management knowledge is to identify typical actors in this market - especially academics and producers of business discourse (e.g. business media organizations, consultants, gurus, book editors) – and to understand their role in creating the belief that specific organizational practices represent rational and appropriate solutions to typical organizational problems. Concerning the way this belief is created, it has thereby often been argued that differences should be observable between the two major social contexts in which discourses on organizational practices are produced – namely academic and practitioner oriented discourses (Kieser & Leiner, 2009; Seidl, 2007). Although we observe that practices generally co-occur more often in academia than in business press, our results do not point to strong differences concerning the patterns of co-occurrences and the underlying mechanisms that work in these two contexts. How can we explain this unexpected similarity? First, it is often argued that different meaning systems predominant in individual social contexts are embedded in higher-level meaning systems (Zilber, 2006). The overarching societal mission of discourse in both contexts is to create and disseminate knowledge and new ideas to relevant audiences. Hence, the higher-level meaning systems in which discourses on organizational practices are embedded in may be stronger than lower-level, context-specific meaning systems. Second, basic principles may have moved between social contexts diminishing observable differences. For example, Barley, Meyer and Gash (1988) have found that the business press discourse on corporate culture has shaped the way this concept is discussed in academia. These potential explanations and our results might thus point to weaker communication barriers between academia and practitioner oriented press than theoretically expected by prior research (Kieser & Leiner, 2009; Seidl, 2007).

2.5.3 Limitations and outlook

Our study underlies some limitations which might represent interesting paths for future research. First, semantic meaning assigned to the labels of organizational practices we assess in this study might differ, especially across social contexts such as academia and business press. As for example Barley Meyer and Gash (1988) have demonstrated academia and business press at times developed a differing understanding of what organizational culture means. Hence, different conceptualizations of an organizational practice might at times be subsumed under the same practice label in different spheres. Our approach of merely counting the co-occurrence of practice labels in different media as well as assessing general patterns of their semantic combination could thus be refined by accounting for sphere-specific processes of editing and translating concepts and specific processes of publication. Nevertheless, we would argue that the striking similarities in the way theorizers from both spheres tend to combine and by this means make sense of practice labels in texts indicate that at least a rudimentary shared definition of these label’s underlying meaning exists across these spheres. Accordingly, over time, Barely, Meyer and Gash (1988) observe a certain convergence in how the practice "corporate culture" was viewed in academic and business media discourse. Second, in line with prior research, the basic assumption of this study is that, in order to initiate theorization processes as a prerequisite of large-scale diffusion, organizational practices have to be embedded in existing discourses evolving around other organizational practices. Nevertheless, in our attempt to understand upscale processes to diffusion and legitimation, namely the process of theorization itself, we are so far not able to provide insights on whether a direct relationship exists between the way theorizers connect organizational practices to the stock of existing practices and their diffusion or legitimation. We would, as outlined above, however argue that the results of our study allow for the development of a number of propositions on this potential relationship. Future work might thus build on our insights concerning typical ways theorizers connect practices to the stock of existing management knowledge in order to test whether certain ways of combining new and existing knowledge in texts – e.g. unpopular with more popular practices – have significant effects on a focal practice's legitimation and/or diffusion.

In spite of these limitations, this study contributes to generating a deeper understanding of how management knowledge is created and established. Understanding mechanisms and patterns of text production in academic and practitioner oriented media means to understand one of the most powerful filters that influences which beliefs about appropriate and rational managerial behavior establish and become accepted while others are sorted out. Whether through higher education, media consumption, seminars or other channels, these beliefs about appropriate and rational managerial behavior constitute a crucial aspect of managerial decision makers' socialization. By identifying filtering patterns the creation of accepted management knowledge is guided by, we thus contribute to understanding subtle but potentially striking forces that influence the way contemporary organizations are run.

2.6 Appendix A

2.6.1 Appendix A1: Some examples for category "semantically unconnected"

Example 1: THE MAKING OF TWENTY-FIRST-CENTURY HR: AN ANALYSIS OF THE CONVERGENCE OF HRM, HRD, AND OD. Ruona, Wendy E A; Gibson, Sharon K. Human Resource Management 43. 1 (Spring 2004): 49-66.

The two organizational practices co-occurring in this text are Total Quality Management and Change Management. Both of these practices are referenced only once in the text and are thereby used to describe the certain time period. No relationship between the practices is created and several pages lie between the two text passages that we present below (emphasis added).

"Operationally Proactive

In the 1980s, factors such as deregulation and imports introduced new competitive pressures on organizations, triggering a shift in priorities toward internal business issues (Beaumont, 1992; Dyer &Holder, 1988). Organizations during this era were greatly influenced by global competition and **total quality management** (TQM; Freedman, 1990). Workforce unionization levels, particularly in the private sector, began to decline and the United States saw relative growth in the service, white-collar employment sector. The recession of 1991-1992, along with recognition of the high costs of the hierarchical structure of many companies, resulted in a reduction of staff functions and a strong focus on becoming more flexible, responsive, and productive (Brockbank, 1999)." (p. 54)

…

"Strategically Reactive Period Analysis.

During this period, we see an increasing emphasis on the strategic alignment and positioning of each of the three emerging professions. This is not surprising given the clear shift toward a resource-based view of the organization (Barney, 2001; Wright, Dunford, &Snell, 2001) and important innovations of the day such as Prahalad &Hamel's (1990) ideas on the roots of the core competence of organizations. Each field turned its attention to aligning its interventions to strategy. In most cases, this was reactive in the sense that the strategy was often delivered to HRM, HRD, and OD for these professions to "react to." Business literacy, **change management**, and strategic thinking were identified as the competencies needed for these professions to effectively align their interventions with organizational requirements. We also see during this period that each field had to become more systematic in what they do to accomplish their goals. This included a clear emphasis on demonstrating the effectiveness and impact of interventions. Most importantly, each field had to adopt a more systemic view of the organization and incorporate this view as a basic assumption underlying their interventions." (p. 57)

Example 2: BSkyB head of legal and business relinquishes role after fifteen years. The Lawyer (Dec 15, 2003): 2.

The article described a new manager of a firm. The first label Work-life-balance is thereby mentioned as one reason for leaving the firm used to be working for. The second label Coporatate Governance is referenced when the manager's duties in the new firm are described Taken together, no relationship between the two practices is created.

"Full Text: The head of legal and business affairs at BSkyB Deanna Bates has stepped down from her role after 15 years. She will be replaced by her deputy, James Conyers. Bates will continue working in the legal department for two days a week and was keen to emphasise that the move had nothing to do with the appointment of new chief executive James Murdoch. "I've been head of legal and business affairs since 1985 and 15 years is quite a long time. It's totally all-consuming and you have to give it your all. I just wanted a different **work-life balance**," Bates told The Lawyer. Conyers will be joined at the head of the 42-lawyer group by head of regulatory affairs Michael Rhodes. Both previously reported to Bates, but will now report separately to Murdoch, while acting as co- general counsel. In the short term, Bates will continue to negotiate the Premier League contracts that Sky has been awarded and will complete the company's **corporate governance** review, which was necessitated by the Sarbanes-Oxley Act. Conyers has been a colleague of Bates for the last 10 years and Bates expects to continue their close working relationship.Bates has overseen the company's transformation from a start-up to a FTSE top 20 company, successfully winning Premier League contracts and dealing with Office of Fair Trading inquiries during that period. Copyright: Centaur Communications Ltd. and licensors”

In the following examples, one of the practice labels is mentioned only once in the text in the description of one of the author’s general research interests or affiliation. Although the other practice may be a relevant issue in the text, the two co-occurring practice labels are not connected. Since the author’s description can in all of these cases be found at the end of the text, in many cases several pages lie between the co-occurring practice labels.

Example 3: Entrepreneurship and Philanthropy: The Case of Small Australian Firms. Schaper, Michael T; Savery, Lawson K. Journal of Developmental Entrepreneurship 9. 3 (Dec 2004): 239-250.

“Background: In recent years there has been a growing recognition of the nexus between society and the individual business enterprise. Once an area of relatively minor concern, the relationship between firms and their community is now a major area of contemporary management research. Often referred to as "**corporate social responsibility**," such studies seek to examine the role that business organizations play in the activities and development of society.”

….

“Author description: Professor Michael Schaper holds the university Chair in Small Business and Entrepreneurship at the University of Newcastle in Australia. His research interests include micro-firms and home-based businesses, business advisory services, sustainable development and indigenous entrepreneurship. Professor Lawson Savery is the Executive Dean of the Division of Business at Southern Cross University in New South Wales, Australia. His research interests include small businesses, **human resource management**, industrial relations and management practices.”

Example 4: THE MARKETING - HUMAN RESOURCE INTERFACE: SUPERIOR PERFORMANCE FOR THE SMALL BUSINESS. Voss, Kevin E; Frankwick, Gary L; Chakraborty, Goutam. Journal of Business and Entrepreneurship 14. 2 (Oct 2002): 69-0_13.

“The authors propose a model that integrates important constructs from both **human resource management** and marketing. The conceptual model suggests that small business managers possess both customer focus and employee focus.”

….

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Example 5: Emerging Trends in Board Total Compensation. Zong, Linda. Compensation and Benefits Review 36. 2 (Mar/Apr 2004): 45-53.

"A typical board compensation program has included multiple components in varying balances that are dependent on the company's culture and particular goals. The remuneration of board directors generally involves a combination of a fixed annual retainer, board and committee meeting fees, a committee chair fee and equity based awards, such as outright stock grants, restricted stock, **stock options** and deferred stock. This article traces some of the highlights among the emerging trends in changes of board compensation programs."

….

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2.6.2 Appendix A2: First naming of a practice

nr	practice	total age (in 2010)	paper	scholarly	magazines	trade
1	Balanced Scorecard	19	Introduction: Performance Measurement and Management Schneier, Craig Eric. Human Resource Management (1986-1998)30. 3 (Fall 1991): 275-277.	1		
2	Change Management	37	FOUR CHANGE STRATEGIES Weldon, WardView Profile. Training and Development Journal27. 7 (JUL 1973): 16.			1
3	Corporate Culture	34	Changing the Corporate Culture Silverzweig, Stan; Allen, Robert FView Profile. Sloan Management Review (pre-1986)17. 3 (Spring 1976): 33.			1
4	Corporate Governance	49	The Meaning of Modern Business: An Introduction to the Philosophy of Large Corporate Enterprise. by Richard Eels Review by: Myron W. Watkins. The Journal of Business , Vol. 34, No. 1 (Jan., 1961), pp. 76-78	1		
5	Corporate Social Responsibility	47	Procedures for Employee Displacement: Advance Notice of Plant Shutdown Arnold R. Weber and David P. Taylor The Journal of Business , Vol. 36, No. 3 (Jul., 1963), pp. 302-315	1		
6	Human Resource Management	43	Long range planning for human resource management Kimball, R TView Profile. Personnel Journal (pre-1986)46. 000005 (May 1967): 282.			1
7	Joint Venture	69	BUDGETARY CAPITAL EXPENDITURES FOR AN OIL COMPANY Watson, John WView Profile. National Association of Cost Accountants. NACA Bulletin (pre-1986)23. 4 (Oct 15, 1941): 207.			1
8	Just-in-Time	29	Adaptable Kanban System Helps Toyota Maintain Just-in-Time Production: IE IE Monden, YasuhiroView Profile. Industrial Engineering13. 5 (May 1981): 28.			1
9	Knowledge Management	35	BUREAUCRACY, TECHNOLOGY, AND KNOWLEDGE MANAGEMENT Henry, NicholasView Profile. Public Administration Review35. 6 (NOV./DEC. 1975): 572.	1		
10	Learning Organization	30	A labour-management contract and quality of working life: SUMMARY Davis, Louis EView Profile; Sullivan, Charles S. Journal of Occupational Behavior (pre-1986)1. 1 (Jan 1980): 29.	1		
11	Mergers and Acquisitions	62	Is Big Business A Threat to You?: DON'T FALL for that mossy old line about the big companies gobbling up the little ones and stifling competition. 'Tain't so today Livingston, J AView Profile. Nation's Business (pre-1986)36. 3 (Mar 1948): 41.		1	
12	Quality Management	52	INVESTING: HOW TO MAKE A START: The editors pin down the Changing Times investment Changing Times (pre-1986); Nov 1958; 12, 11; ABI/INFORM Complete pg. 7			1
13	Shareholder Value	29	Selecting Strategies That Create Shareholder Value Rappaport, Alfred. Harvard Business Review59. 3 (May/Jun 1981): 139.		1	
14	Stock Option	70	Two new research bulletins Anonymous. Journal of Accountancy (pre-1986)69. 000006 (Jun 1940): 427.	1		
15	Strategic Plan	62	BUDGETING PLANNING OF MANUFACTURING OPERATIONS Gross, Norman H. National Association of Cost Accountants. NACA Bulletin (pre-1986)30. 3 (Oct 1, 1948): 103.			1
16	Work Life Balance	18	Corning Enterprises: The Corporation Behind the Community Wilbur, Tom. CNY Business Journal8. 7 (Jun 15, 1992): 7.			1
17	Supply Chain Management	39	CONTROLLING PREMIUM TRANSPORTATION EXPENDITURES Davis, Grant MView Profile. Journal of Purchasing7. 4 (NOV 1971): 24.	1		
18	Lean Management	35	LEAN MANAGEMENT - HOW BILL LYON'S TIGHT LITTLE TEAM FATTENS UP SALES AND EARNINGS Wells, H Clarke. House & Home47. 5 (MAY 1975): 87.			1
19	Innovation Management	32	Entrepreneurial Management Demands Corporate Thinking Changes: Rockwell Marketing News12. 1 (July 14, 1978): 5.			1
20	Customer Relationship Management	26	Meeting the Competitive Challenge Orzell, Frank R. ICP Interface9. 2 (Summer 1984): 8.			1
21	Key Account Management	26	Consider These 22 Functions Which Impact Marketing Anonymous. Marketing News18. 17 (Aug 17, 1984): 10.			1
22	Business Process Reengineering	30	The New Industrial Engineering: Information Technology And Business Process Redesign Davenport, Thomas H;Short, James E Sloan Management Review; Summer 1990; 31, 4; ABI/INFORM Complete pg. 11	1		
23	Mission Statement	33	BUSINESS PLANNING FOR GROWTH AND PROFITABILITY - PART I Rowley, Calvin E. Retail Control45. 10 (AUG. 1977): 2.			1
24	Kaizen	25	From Darwin to now: The evolution of organizational strategies Foster, Lawrence WView Profile. Journal of Business Strategy (pre-1986)5. 000004 (Spring 1985): 94	1		
25	Pay for Performance	43	HOW TO DOUBLE YOUR SALES Drucker, Peter FView Profile. Nation's Business (pre-1986)55. 3 (Mar 1967): 80.		1	
26	Management by Objectives	52	8 SKILLS MAKE A MANAGER: New findings show that successful leaders must restrict themselves Allen, Louis A Nation's Business (pre-1986); Feb 1958; 46, 2; ABI/INFORM Complete, pg. 34		1	

nr	practice	total age (in 2010)	paper	scholarly	magazines	trade
27	Diversity Management	21	The Corporate Response To Work Force Diversity Solomon, Charlene MarmerView Profile. Personnel Journal68. 8 (Aug 1989): 42.			1
28	Strategic Alliance	28	Why go global? White, Michael DView Profile. Best's Review (1982): NA.			1
29	Virtual Corporation	18	IT Connectivity and Pan-European Hospitality Marketing Gamble, Paul RView Profile. European Business Review92. 1 (1992): 11.	1		
30	Core Competences	45	THE CAPABILITY INVENTORY: ITS ROLE IN LONG-RANGE PLANNING E Kirby Warren. Management of Personnel Quarterly (pre-1986)3. 4 (Winter 1965): 31.	1		
31	ISO 9000	22	Quality Assurance, European Style Short, Herb. Chemical Engineering95. 14 (Oct 10, 1988): 26.	1		
32	Outsourcing	28	The New UAW Contract: A Fortune Proposal Ross, Irwin. Fortune105. 3 (Feb 8, 1982): 40.		1	
33	Growth Strategies	45	COLLEGE NEWS: COLLEGE ON LOGISTICS Management Science (pre-1986)11. 8 (Jun 1965): C132.	1		
34	Six Sigma	21	What Motorola Learns From Japan Henkoff, Ronald. Fortune119. 9 (Apr 24, 1989): 157.		1	
35	Benchmarking	38	BENCHMARKING VS. SIMULATION IHRER, FRED C. Computers and Automation21. 11 (NOV 72): 8.		1	
36	Virtual Team	18	New Job Titles, Functions Abound in Market LaPlante, Alice. Computerworld26. 18 (May 4, 1992): 90.			1
37	Scenario Plan	30	Shell's "Multiple Scenario Planning": A Realistic Alternative to the Crystal Ball Anonymous. Financial Times of London World Business Weekly3. 13 (Apr 7, 1980): 14.			1
38	Network Organization	24	Organizing to Implement Strategies of Diversity and Globalization: The Role of Matrix Designs: IN... Galbraith, Jay R;Kazanjian, Robert K Human Resource Management (1986-1998); Spring 1986; 25, 1; ABI/INFORM Complete, pg. 37	1		
39	Mass Customization	25	Grocers Come to Bottleneck as Coke Choices Overflow Walden, Gene. Minneapolis / St. Paul CityBusiness3. 12 (Sep 25, 1985): 7.			1
40	Quality Circle	31	A Quality Concept Catches on Worldwide Industry Week201. 2 (April 16, 1979): 125.			1
41	Activity Based Management	19	Activity-Based Management: Past, Present, and Future The Engineering Economist36. 3 (Spring 1991): 219.	1		
42	Empowerment	82	American trade-unions and the problem of unemployment Anonymous Monthly Labor Review (pre-1986); Mar 1928; 26, 000003; ABI/INFORM Complete, pg. 8			1
43	Collaborative Innovation	17	Patterns of collaborative innovation in the US telecommunications industry after divestiture Zanfei, Antonello. Research Policy22. 4 (Aug 1993): 309.	1		
44	Shared Service Center	17	Director's chair: CUNA's environmental scan: change, diversity shape the future Merrick, Bill. Credit Union Magazine59. 7 (Jul 1993): 12.			1
45	Blue Ocean Strategy	6	BLUE OCEAN STRATEGY W Chan Kim; Mauborgne, Renee. Harvard Business Review82. 10 (Oct 2004): 76-84.		1	
46	Loyalty Management	19	Air Miles program prepares for takeoff Strategy2. 24 (Aug 12, 1991): 6.			1
47	Agile Strategy	15	Future (without) shock Vasilash, Gary S. Production107. 4 (Apr 1995): 31.			1
48	Horizontal Corporation	17	The horizontal corporation Byrne, John A. Business Week 3351 (Dec 20, 1993): 76.		1	
49	Open Market Innovation	8	Open-market innovation Rigby, DarrellView Profile; Zook, Chris. Harvard Business Review80. 10 (Oct 2002): 80-89.		1	
50	Consumer Ethnography	8	Can consumers escape the market? Emancipatory illuminations from Burning Man Kozinets, Robert VView Profile. Journal of Consumer Research29. 1 (Jun 2002): 20-38.	1		
51	Employee assistance program	34	CORPORATE SOCIAL-RESPONSIBILITY Karp, Robert E. Training and Development Journal30. 11 (NOV. 1976): 10.			1
52	Sensitivity training	53	LEADERSHIP: A FRAME OF REFERENCE: 1. INTRODUCTION Tannenbaum, RobertView Profile; Massarik, FredView Profile. Management Science (pre-1986)4. 1 (Oct 1957): 1.	1		
53	Job Enrichment	53	THE USE OF PSYCHOLOGY IN INDUSTRY: A TRADE UNION POINT OF VIEW: 1. PSYCHOLOGY FOR WHAT PURPOSE Gomberg, William. Management Science (pre-1986)3. 4 (Jul 1957): 348.	1		
			number	**19**	**10**	**24**

2.6.3 *Appendix 3: Indicators for practice connection in academic and business press discourse*

		scholarly		business		co-occurrence/ occurrance ratio			number of practices		
nr	**practice**	**Occurrences**	**Co-Occurrences**	**Occurrences**	**Co-Occurrences**	**academia**	**business press**	**academia - business press**	**academia**	**business press**	**academia - business press**
1	Balanced Scorecard	1728	1546	760	565	88.04%	75.87%	12%	43	23	21
2	Change Management	3262	2839	2497	1481	87.35%	60.97%	26%	47	27	20
3	Corporate Culture	3967	3134	5040	2453	78.56%	48.96%	30%	47	30	18
4	Corporate Governance	5270	3228	4335	1905	59.09%	44.35%	15%	45	26	19
5	Corporate Social Responsibility	2243	1685	1831	748	75.81%	42.97%	33%	40	22	19
6	Human Resource Management	7325	5322	5932	2416	70.70%	45.23%	25%	48	28	20
7	Joint Venture	2910	1890	14038	2753	65.18%	20.25%	45%	46	25	21
8	Just-in-Time	2168	1733	2946	1272	79.05%	44.43%	35%	45	26	20
9	Knowledge Management	5972	4462	2018	1084	73.05%	53.37%	20%	47	28	19
10	Learning Organization	2425	2200	385	281	90.57%	76.54%	14%	45	14	31
11	Mergers and Acquisitions	2383	1638	5334	2013	66.79%	38.80%	28%	44	27	17
12	Quality Management	6684	4778	2123	1160	71.88%	57.60%	14%	47	23	24
13	Shareholder Value	2201	1898	2477	1351	85.16%	56.39%	29%	45	27	18
14	Stock Option	1624	901	2762	1120	54.44%	40.08%	14%	40	24	16
15	Strategic Plan	7471	5231	12669	4508	68.80%	36.07%	33%	48	37	12
16	Work Life Balance	1048	649	2415	944	65.41%	39.62%	26%	39	21	18
17	Supply Chain Management	4832	3698	4674	2430	76.15%	54.94%	21%	46	28	18
18	Lean Management	675	633	456	303	92.72%	66.54%	26%	48	32	16
19	Innovation Management	2876	2222	180	114	73.86%	61.22%	13%	44	9	35
20	Customer Relationship Management	2344	1777	3717	1487	74.09%	43.56%	31%	45	28	17
21	Key Account Management	106	90	36	26	81.47%	85.29%	-4%	26	2	24
22	Business Process Reengineering	1020	880	632	379	84.73%	63.35%	21%	44	18	26
23	Mission Statement	1480	1219	1356	192	79.98%	24.01%	56%	41	18	24
24	Kaizen	407	391	607	409	96.58%	68.76%	28%	37	17	20
25	Pay for Performance	719	491	1334	574	69.92%	47.60%	22%	37	15	22
26	Management by Objectives	222	198	86	61	89.86%	79.21%	11%	36	10	26
27	Diversity Management	336	273	67	44	81.67%	69.32%	12%	35	7	28
28	Strategic Alliance	1015	896	846	362	89.09%	42.90%	46%	40	17	23
29	Virtual Corporation	109	104	18	16	95.78%	92.31%	3%	33	4	29
30	Core Competences	3387	2995	3390	1943	87.71%	59.15%	29%	38	4	34
31	ISO 9000	1493	1355	1230	581	91.22%	49.46%	42%	41	9	32
32	Outsourcing	7284	5197	20545	7403	71.12%	36.12%	35%	48	35	13
33	Growth Strategies	1191	825	2872	1148	67.63%	40.21%	27%	39	16	24
34	Six Sigma	1481	1243	2040	1290	83.77%	64.19%	20%	44	26	18
35	Benchmarking	5544	4006	4712	2082	71.20%	45.61%	26%	47	26	22
36	Virtual Team	419	324	133	77	76.57%	54.26%	22%	38	10	29
37	Scenario Plan	4	2	9	5	25.00%	27.78%	-3%	2	0	2
38	Network Organization	260	205	36	19	79.90%	62.50%	17%	33	5	29
39	Mass Customization	650	505	292	131	76.40%	44.91%	31%	40	13	28
40	Quality Circle	491	452	70	53	92.45%	75.50%	17%	40	6	34
41	Activity Based Management	111	95	77	55	84.17%	70.13%	14%	27	11	17
42	Empowerment	3212	2629	1456	777	81.50%	54.47%	27%	46	27	20
43	Collaborative Innovation	97	82	43	20	80.20%	48.08%	32%	23	2	21
44	Shared Service Center	11	10	42	30	95.00%	77.14%	18%	6	0	6
45	Blue Ocean Strategy	65	58	40	21	44.62%	75.64%	-31%	17	3	14
46	Loyalty Management	39	28	68	28	71.21%	47.56%	24%	18	4	14
47	Agile Strategy	17	17	13	4	100.00%	16.67%	83%	13	1	13
48	Horizontal Corporation	7	7	0	0	100.00%	0.00%	100%	10	0	10
49	Open Market Innovation	11	11	2	2	100.00%	100.00%	0%	18	0	18
50	Consumer Ethnography	0	0	1	1	0.00%	50.00%	-50%	0	1	-1
51	Employee assistance program	176	114	485	219	68.77%	48.89%	20%	26	6	20
52	Sensitivity training	86	55	95	26	66.54%	26.68%	40%	25	2	23
53	Job Enrichment	74	59	55	38	72.47%	62.21%	10%	38	3	35
	mean	**1904**	**1439**	**2251**	**913**	**76.48%**	**53.16%**	**23.31%**	**36**	**15**	**20**
	median	**1048**	**880**	**760**	**379**	**78.56%**	**50.00%**	**23.65%**	**40**	**16**	**20**
	standard deviation	**2164**	**1569**	**3780**	**1306**	**17.36%**	**19.02%**	**21.69%**	**13**	**11**	**7**
	min	**0**	**0**	**0**	**0**	**0.00%**	**0.00%**	**-50.00%**	**0**	**0**	**-1**
	max	**7471**	**5322**	**20545**	**7403**	**100.00%**	**100.00%**	**100.00%**	**48**	**37**	**35**
	sum	**100932**	**76280**	**119277**	**48404**						

3 Antecedents of symbolic adoption: Popular organizational practices on the internet self-representation of the 500 largest firms in Germany

3.1 Introduction

In the management literature, it has been stated that organizations might be able to gain or maintain legitimacy and reputation through symbolically adopting popular organizational practices that are in line with external expectations (Deephouse D. , 1996; Ruef & Scott, 1998; Boxenbaum & Johnsson, 2008). It has therefore been argued that popular organizational practices provide organizations with well-defined, generally accepted symbols and labels encapsulating sets of logics that can be used to reflect stakeholder demands (Staw & Epstein, 2000). Empirical studies largely support this view by showing that symbolically adopting popular organizational practices may lead to enhanced reputation and legitimacy (Staw & Epstein, 2000), to an increased value in the stock market (Westphal & Zajac, 1998; Fiss & Zajac, 2006), or to the acquisition of more resources (Zott & Huy, 2007).

At the same time, significant changes regarding the possibilities and costs of organizational self-representation have occurred over the last decade. Presently, the Internet offers organizations the opportunity to relatively inexpensively reach a high number and diversity of constituents and to reflect their multiple expectations, heavily extending possibilities of symbolic adoption of organizational practices (Pollach, 2005). In view of existing theoretical arguments and empirical results on positive economic and social outcomes of symbolic adoption and these changing conditions for organizational self-representation, one important question has remained largely unanswered: Why do some firms decide to symbolically adopt popular organizational practices and others do not, despite the fact that symbolic adoption is rather inexpensive and positive effects on reputation, legitimacy, and resource endowments can be expected? Put differently: What are the antecedents of symbolic adoption?

To answer this question, we develop a theoretical model of symbolic adoption consisting of three major classes of antecedents. First, based on existing theoretical arguments conceptualizing organizations as socio-political arenas (Cyert & March, 1963) and prior empirical work on symbolic adoption, we suggest that power constellations related to ownership structures should influence firms' symbolic adoption behaviors (Fiss & Zajac, 2004). Second, referring to arguments derived from institutional theory, we propose that symbolic adoption of organizational practices might be seen as an attempt to deal with demands stemming from diverse social contexts (DiMaggio & Powell, 1983). Third, based on arguments from resource dependence and impression management theory, we argue that an organization's public visibility both drives and constrains the propensity of symbolic adoption (Salancik, 1979; Carter, 2006). Ultimately, this theoretical model helps us to understand under which conditions symbolic adoption might be a more or less viable way for organizations to address environmental demands and by this means reach economic and/or social gains.

We test our theoretical framework empirically by assessing Internet self-representations of the 500 largest firms in Germany using data collected from a proprietary web crawler. This semi-automated data collection procedure allows us to assess the complete Internet self-representation of each firm—including sub-pages, campaign pages, product pages etc.—resulting in a final dataset of more than 8,000 single URLs and about 100,000 single pages. Using this dataset, we assess symbolic adoption of 16 popular organizational practices among these firms and use regression models to predict the amount and variety of symbolic adoption of organizational practices occurring at the firm level. Our results provide general support for the theoretically derived expectations on the antecedents and limits of symbolic adoption.

We confirm that socio-political and new institutional arguments on the influence of power constellations and pressure for conformity on substantive adoption of management practices also hold true for the case of symbolic adoption of organizational practices within firms' self-representations on the Internet. Specifically, we not only identify drivers of symbolic adoption, but also find that certain ownership constellations serve as limiting factors. In addition, controlling for similarities in power constellations and the influence of social contexts, we find that organizations may still differ significantly with respect to symbolically adapting to the resulting demands. We find empirical support for our theoretically driven assumption that, to a certain extent, media attention leads to an increase regarding symbolic adoption efforts. However, if visibility is very high, the propensity increases that firms are critically assessed, which seems to limit their willingness to symbolically adopt popular organizational practices. With our theoretical arguments and empirical results, we contribute to developing a finer grained theory of antecedents and especially of limits of symbolic adoption. Our insights thus contribute to developing a deeper understanding of factors that enable or constrain organizations in their possibilities to profit from symbolic adoption.

3.2 Theory development

3.2.1 *Symbolic adoption of organizational practices*

One major argument in new institutional theory is that, in their attempt to gain and maintain legitimacy and by this means secure their survival, organizations adapt to institutionalized beliefs about rationality and progress imposed on them by their environment (Fiss & Zajac, 2004; Suchman, 1995; Scott, 2008). Led by coercive, mimetic, and normative pressures toward isomorphism, organizations adopt practices and concepts that are perceived as appropriate and legitimate by their relevant environments (DiMaggio & Powell, 1983). The adaption to institutionalized demands thereby involves two major problems (Boxenbaum & Johnsson, Isomorphism, diffusion and decoupling, 2008): First, institutionalized norms and corresponding practices may differ from internal core activities that have proven the most effective and efficient ways to manage organizational processes. Second, an organization’s institutional environment is not necessarily homogeneous, but may consist of different types of constituencies, potentially imposing contradictory demands on the organization (Scott & Meyer, 1991; Friedland & Alford, 1991). Satisfying the demands of one part of the environment may thus take place at the expense of another part. As a result, it has often been observed that organizations loosely couple (Weick, 1976) or decouple (Meyer & Rowan, 1977) formal structures from environmental demands (Bromley & Powell, 2012). Organizations may thus successfully adapt their structures to “rationalized myths” on a symbolic level while leaving core activities unchanged. The adoption of organizational practices can thus takes place on at least two analytically separate levels: First, organizations can adopt a practice’s rules for organizing by adjusting internal processes—often termed "substantive adoption" (Westphal & Zajac, 1998, p. 137). Second—irrespective of substantive adoption—organizations can evoke the impression that substantive adoption has taken place by referencing a practice in channels of their self-representation. The latter aspect has often been termed "symbolic adoption" and is the core focus of this paper.

It has been shown that popular organizational practices, such as shareholder value management, total quality management, or stock options, play a crucial role in this regard for at least two reasons. First, besides encapsulating solutions for organizational problems and thus rules for internal adjustment (Barley & Kunda, 1992), practices provide organizations with popular symbols and labels and thus with tools to symbolically adapt to internal and external expectations (Thornton & Ocasio, 1999; Seo & Creed, 2002; Elsbach & Sutton, 1992; 1998; Fiss & Zajac, 2006). It has thereby been argued that organizational practices are characterized by a low degree of codification (Hasselbladh & Kallinikos, 2000) and empirical precision (Astley & Zammuto, 1992) that allow a certain leeway when it comes to interpretation and adoption (Benders & Van Veen, 2001; Giroux, 2006; Kieser, 1997). This “linguistic ambiguity” thus increases the range of potential (symbolic) adopters to which the practices’ vocabulary may potentially refer (Astley & Zammuto, 1992). In their attempt to preserve organizational coherence, organizations thus use ambiguous language in their communications (Eisenberg, 1994) since “linguistic ambiguity allows different groups to support the same general policy for different reasons" (Astley & Zammuto, 1992, p. 450). Hence, although the basic idea behind popular organizational practices may be supplying procedural knowledge in the form of organizing rules and routines for managers, it has been argued that practices may simultaneously benefit organizations because they are “symbolically efficient” (Birkinshaw, Hamel, & Mol, 2008; Abrahamson, 1991, p. 608; Kieser, 1997).

Second, current research has shown that many popular organizational practices have successfully diffused across a variety of nation-states and industries (Rigby & Bilodeau, 2007) as well as organizational forms (Bromley, Hwang, & Powell, 2011). Although it has been argued that practices underlie adaptations when traveling from one context to another (Woywode, 2002; Czarniawska & Joerges, 1996), it has also been shown that their major labels and symbols have frequently prevailed and gained prominence on a global level (Rigby & Bilodeau, 2007). Besides their potential value in terms of adapting to specific internal and external expectations of dedicated stakeholder groups, practice labels and symbols thus provide organizations with the opportunity to describe their activities in a way that is comprehensive across different social contexts, such as countries or industries.

Following these arguments and observations, we conceptualize organizational practices as containing both knowledge about potential solutions for organizational problems, which might be reflected in organizational processes, e.g., through the establishment of specialized departments, and as providing organizations with standardized symbols and labels encapsulating sets of logics like progressiveness, responsibility, sustainability, efficiency, or accountability (Zbaracki, 1998) that enable organizations to respond to “rationalizing pressures” (Bromley & Powell, 2012, p. 5) from the environment.[9]

3.2.2 Outcomes of symbolic adoption.

A considerable amount of empirical research has been conducted to identify outcomes of symbolic versus substantive adoption of organizational practices. It has been shown that symbolic adoption of single management practices oftentimes yields measurable social and economic outcomes. Investigating the adoption of CEOs' long-term incentive plans on both a substantive and a symbolic level, Westphal and Zajac (1998) showed that symbolic adoption of this practice initiates measurable positive reactions on the stock market. Staw and Epstein (2000) found that firms referring to popular organizational practices profit from higher reputation and are considered more innovative and to have superior management. Moreover, the authors emphasized the role of symbolic adoption in this context, suggesting that the “informational linkages” of organizations to popular management techniques—such as quality management, teamwork, or empowerment—are significantly related to organizational reputation and have an even stronger effect on organizational reputation than the substantive adoption of these practices. Related to this, Zott and Huy (2007) demonstrated that entrepreneurs performing certain symbolic actions are better able to gain legitimacy and thus obtain more resources (employees, capital, and customers). Fiss and Zajac (2006) expanded on these findings by showing that certain ways of framing adopted practices initiate more positive market responses than others. Their results indicate that, when adopting a contested practice—the authors investigated the adoption of the practice of shareholder value management in the German context—firms are evaluated higher on the stock market when they use a balancing framing to justify adoption of the practice rather than choosing a frame of acquiescence (Oliver C. , 1991).

[9]In this context, Zbaracki (1998) refers to the two versions of TQM: a technical TQM, including guidelines and rules organizations have to follow—e.g., statistical process control, data analysis tools, brainstorming—and a rhetorical TQM, serving symbolic purposes.

What most existing studies have in common is that they focused on outcomes of symbolic adoption, and in this regard show that symbolically adopting popular organizational practices may lead to enhanced reputation and legitimacy (Staw & Epstein, 2000), increased value in the stock market (Westphal & Zajac, 1998; Fiss & Zajac, 2006), or the acquisition of more resources (Zott & Huy, 2007). Furthermore, results of the aforementioned studies suggest that these effects are oftentimes largely independent from the question of whether these practices have been adopted substantively. Since mere symbolic adoption is a comparably cost-saving undertaking—especially in view of today’s possibilities for organizational self-representation on the Internet—it thus seems to represent an acutely attractive organizational strategy when it comes to dealing with modern management practices. Nevertheless, in view of existing insights, the question of why many firms decide not to symbolically adopt a larger number of popular organizational practices remains largely unanswered. Put differently, we lack understanding of antecedents rather than outcomes of symbolic adoption of popular organizational practices and thus of those factors that might enable or constrain organizations in their possibilities to profit from such symbolic actions.

3.2.3 Antecedents of symbolic adoption.

The few studies that contributed to identifying antecedents of symbolic adoption investigated antecedents of the degree of compliance or decoupling. For instance, Fiss and Zajac (2004) investigated the adoption of the practice of shareholder value management among listed German firms, aiming to identify explanations for varying degrees of (non)- adoption. They found that the degree of decoupling decreases with the presence of more powerful and more committed key actors in an organization's relevant environment, suggesting that possibilities for mere symbolic adoption decrease when firms face demands from particularly powerful stakeholders. Westphal and Zajac (1994; 1998) found that an organization’s tendency to symbolically and not substantially adopt CEOs' long-term incentive plans increases for firms with especially powerful CEOs and poor prior performance. Other studies focused on identifying antecedents of rhetorical or framing strategies of symbolically adopted practices (Zajac & Westphal, 1995). Fiss and Zajac (2006) found that German firms receiving greater media attention and firms owned by the government or German banks are more likely to use a balancing framing when introducing the shareholder value practice.

These existing studies provide important insights for understanding antecedents of symbolic adoption of organizational practices. Nevertheless, the focus of existing work lies in explaining differences in symbolic versus substantive adoption—the degree of decoupling—or the chosen framing strategy and not in developing and testing theoretically grounded explanations that help us understand symbolic adoption as a *distinct phenomenon*. Furthermore, all these studies focused on rather specific *empirical settings*, namely, firms that are listed on the stock market and management practices that are to some extent bound to this specific context. Listed firms are per se confronted with strong reporting duties and the practices that have been assessed in the studies mentioned are—in their symbolic value—mostly suitable for gaining legitimacy among shareholders and potential investors. Irrespective of the fact that these studies do not treat symbolic adoption as a distinct phenomenon, it thus seems questionable whether existing theoretical and empirical insights on antecedents of decoupling (when seen as a proxy for symbolic adoption) can be conveyed to other empirical contexts or a broader cross-section of firms (Staw & Epstein, 2000).

Additionally, the existing studies focused on investigating adoption of *single organizational practices*, but such concepts as shareholder value management, total quality management, or corporate social responsibility are often only suitable for gaining legitimacy from a limited number of stakeholders in an organization's environment. Thus, by solely assessing adoption of individual practices, one overlooks that organizational environments are fragmented and that legitimacy is assigned by different types of relevant stakeholders. For instance, while firms might appear progressive vis à vis their shareholders by symbolically adopting the shareholder value practice, they may concurrently lose legitimacy in the eyes of other stakeholders (e.g., NGOs, trade unions). On the other hand, a company may gain legitimacy from stakeholders such as NGOs by symbolically adopting, for instance, the organizational practice of corporate social responsibility while risking disapproval by its shareholders. To understand the symbolic value of popular organizational practices for gaining and maintaining organizational legitimacy, it is thus necessary to account for the fact that in their symbolic actions, firms are able to choose from an ecology of existing practices.

In the next sections, we develop a theoretical model that aims at explaining antecedents of symbolic adoption of organizational practices as a *distinctive phenomenon* relevant for a broader *cross-section* *of firms* and that allows for the fact that in their decision to symbolically adopt organizational practices, firms are able to choose from a *larger number of existing practices*.

3.2.4 Theoretical model of symbolic adoption and hypotheses development

In line with prior research from resource dependency theory (Pfeffer & Salancik, 1978) and complementary work from the domain of institutional theory (Oliver C. , 1991), we anticipate that firms' symbolic adoption behavior is influenced by different aspects of their relevant environment. Our theoretical model of symbolic adoption thereby is comprised of three central elements that have—often in isolation—been discussed by prior research on the diffusion of organizational practices and on symbolic actions: First, from a socio-political perspective, we argue that *power constellations* related to firms' ownership structures, and thus interests and preferences of different ownership groups play a crucial role with respect to symbolic adoption. Second, based on arguments derived from institutional theory, we propose that organizations *spanning social contexts* should display more active symbolic adoption behavior than organizations that are bound to single contexts. Third, referring to arguments derived from impression and symbolic management research, we propose that *firm visibility* serves as an important factor influencing firms' symbolic actions. In what follows, we detail on how these three types of elements should influence the intensity of symbolic adoption of popular organizational practices and develop testable hypotheses about these relationships.

Power constellations.

If we consider organizations as political arenas, an organization's behavior is influenced by the values, objectives, and beliefs of the dominant actors in the respective settings (Cyert & March, 1963; March, 1988). In this view, powerful actors—such as dominant owners—decide which issues receive special attention when scarce resources are allocated (Pfeffer & Salancik, 1978; Fligstein, 1985). As Fiss and Zajac (2004) point out in financial economics literature, owners have often been treated as a rather homogeneous group sharing the goal of shareholder value maximization. Nevertheless, existing studies in organizational theory literature (Palmer, Jennings, & Zhou, 1993; Fiss & Zajac, 2004; Scheiber, Wruk, Huppertz, Oberg, & Woywode, 2012) as well as more recently in economics (Bloom & Van Reenen, 2010) have demonstrated that ownership groups oftentimes differ with regard to the goals they pursue as well as their degree of professionalism, and that these differences affect (symbolic) adoption decisions of organizations. For instance, Palmer et al. (1987) show that ownership structures had at least an indirect—in some cases even a direct—effect on the substantive adoption of the multidimensional form. Fiss and Zajac (2004; 2006) find empirical support for their argument that interests and preferences of different types of blockholding owners significantly influence the diffusion of the shareholder value practice among large German firms. In their recent study in which they attempt to identify similarities and differences between management practices across firms and countries, Bloom et al. (Bloom, Genakos, Sadun, & Van Reenen, 2012) find that ownership structures are strongly linked to observed variations in the implementation of modern management techniques and practices. More specifically, they show that across countries, family- and publicly owned firms are significantly more reluctant to implement modern management practices. According to these existing theoretical and empirical insights, different types of owners should thus have different objectives based on distinct logics and values and by this means would exert different demands on organizational decision-makers (Palmer, Friedland, Devereaux, & Powers, 1987). We now develop testable hypotheses concerning the influence of different types of owners on the intensity of symbolic adoption of popular organizational practices.

Family ownership.

Family-owned firms face specific organizational environments based on the characteristics of their dominant owner(s). Family owners are often personally dependent on the firm's economic well-being, and these firms have frequently been family property ever since their founding (Klein, 2004; Nooteboom, 1994). Family owners are thus often described as exerting their influence based on a rather long time horizon of their "investment," forcing the organization to follow a more continuous and unique strategy (Miller & Breton-Miller, 2007; Sirmon, Hitt, & Ireland, 2007; Le Breton-Miller & Miller, 2006). As a consequence, family-owned firms have been described as rather skeptical and hesitant when it comes to the adoption of—potentially short-lived— popular organizational practices (Bluhm & Geicke, 2007; Scheiber, Wruk, Huppertz, Oberg, & Woywode, 2012). In support of this argument, a current study finds that family-owned firms—and especially those family-owned firms that are also managed by their owners—introduce modern management techniques and practices less often and to a lower extent than firms owned by other shareholders (Bloom, Genakos, Sadun, & Van Reenen, 2012).

With respect to symbolic adoption, it also has to be considered that family-owned firms are in many cases managed by family owners. Furthermore, even if family members are not among the leaders of the firm, managers of family-owned firms are frequently emotionally linked to the family. It has thereby been argued that executives of family firms act as stewards—and thus “with altruism for the benefit of the organization and its stakeholders” (Miller & Le Breton-Miller, 2006, p. 74)—rather than as self-interested opportunistic agents. As a result, the probability of significant deviances between owners' and managers' interests tends to be lower in family-owned firms, while the access of owners to relevant information and thus the possibility to exert direct influence on the firm’s activities tends to be higher, resulting in a reduction of potential principal agent conflicts (Anderson, Mnsi, & Reeb, 2003). Thus, whether because of unity of ownership and control or the fact that executives of family-owned firms tend to act as stewards, managers of family-owned firms should be less dependent on symbolic actions vis à vis company owners via public communication channels. Finally, family-owned companies are frequently more strongly anchored in their local community or relevant environment and have enduring and direct relationships to internal and external stakeholders (Miller & Breton-Miller, 2007; Milton, 2008). This should make them less dependent on indirect communication and self-representation channels such as the Internet, not only when it comes to symbolic actions targeted at company owners. As a result, family-owned firms should face a lower demand to symbolically adopt popular organizational practices.

Hypothesis 1: Organizations primarily owned by private persons or families will engage less in symbolic adoption of popular organizational practices than other organizations.

Public ownership.

In Germany, many firms offering basic services (like energy, mobility, communication) are—although by now partly privatized—to a considerable extent *publicly owned*. Considering this context, it can be argued that publicly owned firms might differ from privately owned firms with respect to the intensity of symbolic adoption of popular organizational practices for several reasons. Publicly owned firms are bound to missions and goals that differ from those of private firms—e.g., to guarantee secure public supply of basic goods or to secure employment (Ehrmann, 2003; Fiss & Zajac, 2004). Publicly owned firms should thus face different institutionalized demands about appropriate behavior than privately owned firms (e.g., a greater emphasis on reliable and widespread supply of goods than on efficient supply of goods and services such as energy or transportation), thus making symbolic adoption of organizational practices developed in the private sector—at least in an unmodified form—less probable. In line with this argument, judging the management quality based on the degree of implementation of modern management practices, Bloom et al. (2012) show that publicly owned firms are less “well” managed than privately held firms.

Additionally, in the German context, public ownership frequently implies that supervisory boards of publicly owned firms, like the Deutsche Telekom or Deutsche Bahn, are partly staffed with government officials or politicians (Ruter, 2004). These persons frequently do not have an educational background in management and related areas and might thus be less demanding with respect to modern management techniques compared to their colleagues in privately held firms (Reichardt, 2004). Third, it has been argued that publicly owned firms frequently face especially strong influences of unions “which place a great emphasis on equity, fairness, and political criteria,” and by this means prevent firms from implementing modern management practices that frequently involve employee performance evaluation, strict performance-based promotion, and a rigid dismissal of “underperformers” (Bloom, Genakos, Sadun, & Van Reenen, 2012, p. 21). Finally, from an economics perspective, it could be argued that publicly held firms might frequently face a lower risk of market exit and are thus to a certain degree shielded from competition, because in cases of economic failures, the state represents a secure source of financing (Bauer J. M., 2005). As a result, managers of publicly held firms might face weaker pressures for conformance with myths of progressiveness and rationality than their counterparts in privately held firms. Based on these arguments, we would thus expect that publicly owned firms report less on popular organizational practices than privately owned firms:

Hypothesis 2: Organizations primarily owned by public authorities will engage less in symbolic adoption of popular organizational practices than other organizations.

Institutional ownership.

Traditionally, firms owned by *institutional investors* such as insurance companies or mutual-fund or private-equity companies[10] are characterized by a rather strict separation of ownership and control (Chaganti & Damanpour, 1991). Institutional owners are thus less able to evaluate internal processes and activities and are more strongly dependent on information accessible on the market (e.g., share price, ratings) as well as facts, reports, and general information provided by the firms to assess the value of their investment. In fact, as Bushee and Noe (2000) demonstrate, institutional investors prefer to invest in firms with more forthcoming disclosure practices. In line with this, Zuckerman (2000, p. 592) argues that managers of firms owned by institutional investors "experience control in the form of pressure to structure their firms in ways that investors deem legitimate." Providing standardized and widely understandable labels and symbols, popular organizational practices should thereby represent viable tools for persuading institutional investors that the company has a management of superior quality (Staw & Epstein, 2000). In line with prior work, we would thus expect that institutional investors are "intendedly but boundedly rational information processors" (Westphal & Zajac, 1998, p. 131) who tend to value disclosures on globally "legitimate" organizational practices more than company-individual solutions to organizational problems. We thus expect that:

Hypothesis 3: Organizations primarily owned by institutional investors will engage more strongly in symbolic adoption of popular organizational practices than other organizations.

Spanning Social Contexts

Organizations receive legitimacy from constituents in the social context they are bound to (Suchman, 1995; DiMaggio & Powell, 1983). Legitimacy is thereby provided when organizations act—or appear to act—in accordance with demands and expectations prevailing in the respective context and are

[10] Although representing a relevant type of firm owners, banks are not added to the list of institutional investors, since they have been shown to have different interests than other institutional investors in the German context because they often have business relationships with the firms they own. Generally, German banks play a crucial role in the German corporate governance system, and in many cases, they hold substantial shares in German companies (Fiss & Zajac, 2004; Jürgens, Naumann, & Rupp, 2000). The firms owned by German banks have thereby been their clients. Based on the long-term relationship between debtor and debtee as well as board interlocks—representatives of banks can often be found in supervisory boards of large firms—German banks have access to extensive information about the firms they (partly) own. They can thus not be treated in the same way as other institutional investors, which usually do not have business relationships with the firms they own.

perceived as being a recognizable part of this context (Zuckerman E. , 1999). Nevertheless, organizations often operate in and are thus bound to demands stemming from different social contexts (Kostova, Roth, & Dacin, 2008). These organizations thus face a double-edged pressure for conformity with regard to their symbolic actions: First, they have to be recognized as *part of each* social context they are operating in. Firms that are not perceived as members of a social category in the respective context are often devaluated and penalized by relevant audiences (Zuckerman E. , 1999). Second, these firms also face the pressure of appearing consistent *across* the different contexts they are bound to. Differences between social categories in various contexts have to be addressed in a way that allows firms to be recognized as part of different social contexts (Zuckerman, Kim, Ukanwa, & von Rittmann, 2003). Resolving these double-edged pressures is not a trivial task, especially with regard to a communication channel like the Internet that is accessible to audiences in different contexts, which makes individualized communication more difficult. As we have outlined, popular organizational practices have frequently diffused globally as well as across different industries and should thus represent a viable communicative device when it comes to reporting on organizational activities in a way that is comprehensible across and within different social contexts. By symbolically adopting organizational practices that enjoy popularity across different contexts, context-spanning organizations may thus be able to reach a certain level of standardization of communication that resonates with values and beliefs of various stakeholders in their fragmented environment. In contrast, organizations that are bound to single contexts might be able to tailor their communications to context-specific expectations that are not necessarily coined by global management trends and practices.

To test this broad proposition, we identify three organizational characteristics that indicate whether an organization spans various contexts— (1) degree of diversification, (2) degree of internationalization, and (3) listing on the stock market—and that should thus positively influence symbolic adoption behavior.

Degree of diversification.

The degree of diversification represents one classical indicator for whether and to what extent a firm spans different social contexts and thus faces diverse expectations, because multiple industry membership may bring different observers and audiences into play, thus complicating impression management and symbolic actions with which firms intend to establish legitimacy and reputation. Audiences of diversified firms receive ambiguous signs that make it difficult for them to evaluate the firms' credibility, legitimacy, and value (Fombrun & Shanley, 1990; Carter, 2006). In fact, empirical evidence shows that industrial diversification may have a negative effect on corporate reputation (Fombrun & Shanley, 1990). Related to this, it has been argued and shown empirically that highly diversified firms are often valued lower than the sum of their individual divisions and that business divisions of diversified firms reach lower levels of firm value than stand-alone firms operating in the same industry (Graham, Lemmon, & Wol, 2002). This "conglomerate discount" can be observed because highly diversified firms are perceived as less profitable and less cost efficient than firms that focus on their core competencies. Based on these arguments, diversified firms should thus face greater pressures to appear rational and progressive than their undiversified counterparts. Because respective demands stem from actors that are bound to different industries, diversified firms concurrently face the challenge of responding to these pressures in a relatively unified way. Symbolically adopting popular organizational practices should thereby represent one viable way for diversified firms to reach a certain level of standardization of communication that resonates with values and beliefs of various stakeholders in their fragmented environments. By this means, diversified firms might even be able to reduce the discount they face when being evaluated on the market.

Furthermore, firms with a high degree of diversification frequently exhibit multi-divisional organizational structures that are frequently designed for conveying more result responsibility to divisional managers and fostering firm internal competition. In this context, it has been argued that symbolically introducing state-of-the-art organizational practices is frequently seen as one viable way for division managers to demonstrate their progressiveness vis à vis a firm's top management (Abrahamson, 1996). Following these arguments, we expect that organizations displaying a high degree of diversification should engage more strongly in symbolic adoption of popular organizational practices. We thus expect that:

Hypothesis 4: The extent of symbolic adoption of popular organizational practices increases with the degree of diversification.

Degree of internationalization

In addition, national boundaries constitute critical factors that shape organizational environments (Rosenzweig & Singh, 1991). It has been argued that organizations displaying a high degree of internationalization cannot be assigned to a single organizational field (Kostova, Roth, & Dacin, 2008) but can rather be described as spanning multiple fields and thus social contexts. Facing different interest groups in various contexts, internationally active organizations—also referred to as multinational enterprises (MNEs)—have to deal with a greater demand for plurality and the pressure to conform to the expectation structures in diverse fields (Kostova, Roth, & Dacin, 2008; Kostova & Zaheer, 1999; Westney, 1993). Facing strong pressures for conformity, MNEs are also expected to engage more intensively in practices that help them to appear consistent to establish corporate reputation (Kostova & Zaheer, 1999). We thus argue that MNEs should be better able to fulfill the demand for conformity on a corporate level and to establish external legitimacy when utilizing standardized language provided by popular organizational practices to address stakeholders across countries.

Besides these external legitimacy requirements, subunits of MNEs face pressures for conformity within the corporation. These internal legitimacy requirements are based on the fact that MNEs are characterized by high internal fragmentation (Ghoshal & Bartlett, 1990), that they are "complex social systems consisting of different activities, product divisions, and locations, which are integrated and interdependent" (Kostova & Zaheer, 1999, p. 72). In firms that only operate in their home countries, internal and external legitimacy requirements are very similar or at least consistent. In contrast, for subunits of MNEs, these requirements may strongly differ, imposing a dual pressure for conformity on MNE subunits: To secure their license to operate in the host country, MNEs' subunits have to adapt to the host country's local environments. At the same time, internationally scattered subunits have to conform to norms and standards stemming from the firm's home country environment to allow for a certain consistency on the corporate level (Zaheer, 1995; Rosenzweig & Singh, 1991). Symbolic adoption of popular organizational practices that are well known and accepted on a global level might thus constitute one viable way for decision-makers of MNC subunits to balance the demands from their local environment and the corporate level. We thus expect that:

Hypothesis 5: The extent of symbolic adoption of popular organizational practices increases with the degree of internationalization.

Listing on the stock market

As we have shown, prior studies on symbolic adoption have almost exclusively concentrated on firms that are listed on the stock market. This might limit our understanding of the phenomenon, since listing on the stock market itself is an indicator of whether firms span different social contexts and thus is an explanatory factor for symbolic adoption. Stock markets represent a particular social context that follow their own rules, norms, and standards and address specific audiences with interests that differ from those of other contexts. Zuckerman (1999, p. 1398) describes the stock market as "significantly mediated by product critics," meaning that analysts have a strong influence on the listed firms' market value. To be perceived and recognized by analysts, he argues, listed firms should display a consistent and unitary appearance (Zuckerman E. , 2000). This pressure for a consistent appearance can be explained by the high diversity and specialization of evaluators and analysts on the stock market.

In addition to the existence of diverse analysts, being listed on the stock market indicates the existence of a larger number of different owners and potential investors with diverging interests and preferences. They can be categorized on the following dimensions: national versus international, private versus public, and private persons versus institutional investors. Various rapidly changing refinements of these categories (e.g., institutional investors could be mutual funds, banks, etc.), the potential combinations of categories (e.g., national, private, institutional), and different combinations of shareholdings are therefore possible. In this view, listed firms span different social contexts in terms of the *audiences* they address and thus face pressures for conformity stemming from the social contexts of these diverse audiences. Using the standardized language provided by popular organizational practices should contribute to addressing these pressures.

Other relevant stakeholders on the stock market include regulatory bodies (e.g., stock exchange supervision) and media representatives. These audiences' demands are often formalized and enforced by law or convention. In fact, listed firms are bound to strict information and publishing duties to make them more traceable for the public or potential investors (Julian, Ofori-Dankwa, & Justis, 2008). These disclosure duties indicate that there is a strong coercive pressure toward standardizing reporting of listed firms. Taken together, these arguments indicate that, to be able to communicate with their diverse audiences in a relatively standardized way, listed firms will be more prone to resorting to popular symbols and labels provided by popular organizational practices than unlisted firms.

Hypothesis 6: Listed firms will engage more strongly in symbolic adoption of popular organizational practices than non-listed firms.

Visibility

Besides the expected influence of powerful owners and of the existence of diverse audiences, we argue that firm visibility serves as a filter for firms' symbolic actions. Visibility as a general term can be defined as the degree of public attention a firm receives, irrespective of whether this might be positive or negative attention—glory or scandal. Firm visibility functions as a filter in the sense that symbolic actions of firms are not equally perceived by their environments but that this perception depends on the degree of public attention. From a resource dependence perspective, Pfeffer and Salancik (1978) argue that constituents exert more pressure for compliance on visible firms than on firms that are not in the public eye. Less visible firms, in turn, are better able to avoid public scrutiny and thus external control and social pressure (Meznar & Nigh, 1995). Related to this, impression management theorists argue that highly visible firms can influence stakeholder responses (Rindova, Pollock, & Hayward, 2006) and will thus engage more strongly in activities potentially enhancing their reputation and legitimacy (Carter, 2006). Institutional theorists state that firms differ with regard to exposure to diverse stakeholder demands and that these differences are likely to affect the firms' symbolic actions (Fiss & Zajac, 2004; Oliver C. , 1991).

A number of empirical studies show that organizational behavior is frequently influenced by an organization's visibility. Delmas and Montes-Sancho (2010) find that visible firms have a greater likelihood of joining the Climate Challenge program early, compared to less visible firms. Salancik (1979) shows that, partly due to resource constraints, governmental pressure for adopting equal opportunity hiring practices is not exerted equally on all firms. Highly visible firms, he shows, experience more pressure when it comes to adopting these practices. Other studies point to the importance of visibility when it comes to organizational self-representation efforts. Wartick (1992) observes that the greater a firm's visibility, the more it is concerned with managing its reputation. Fiss and Zajac (2006) find that firm visibility influences the choice of framing when it comes to justifying the adoption of shareholder value management. Carter (2006) shows that highly visible firms engage more strongly in proactively publishing press releases than less visible firms.

Although conceptual and empirical evidence supports this simple linear relationship between visibility and pressures for conformity, other research suggests a more complex relationship between media visibility and the demand to respond to environmental expectations. In their study on how media visibility influences the behavior of public affairs departments in companies, Meznar and Nigh (1995) do not find a consistent effect of media visibility on the two types of activities they investigate (buffering and bridging) and thus conclude that the relationship between visibility and activities might be more complex than initially expected, calling for further research.

In this paper, we argue that media visibility can have strong effects on how firms symbolically adopt management practices. We thus expect that symbolic adoption is more likely to be observed by internal and external constituents if firms are generally visible to the public. Firms with a certain media visibility might symbolically adopt management practices as a form of proactive impression management or as a response to social pressure for conformity. In turn, firms that are largely invisible in the media and do not get public attention are less likely to profit from potential advantages of symbolic adoption since no considerable audience is observing and valuing their (symbolic) actions (Delmas & Montes-Sancho, 2010).

Nevertheless, we argue that extraordinarily high media visibility might limit organizations' symbolic adoption efforts. High visibility indicates high public scrutiny and intense observation by the relevant environment, which may imply different types of consequences for the firm (Sutton & Galunic, 1996). Positive consequences can be derived from the wide-spread understanding that "whether leaders and their organizations flourish or fail depends on their ability to attract and manipulate public attention" (Sutton & Galunic, 1996, p. 3). Organizations that are noticed by their relevant environment and attain public attention have better access to resources and are rewarded with legitimacy and reputation. As a result, it has been argued that highly visible firms might frequently not deem intense self-representation efforts necessary, because media might oftentimes heavily contribute to creating and establishing a favorable public image (Staw & Epstein, 2000). In this view, journalists and other producers of public discourse strongly engage in establishing and maintaining the firm's image by, for instance, reporting on successful change projects or CEO-succession and incentive plans or making performance announcements. For companies with strong images, self-representation efforts might thus be replaced with external representations of the firm. Highly visible firms might deem symbolic adoption to be less important because different actors in their environment—especially media—perpetuate a favorable public image of the firm.

However, high public scrutiny also brings the risk of rather critical observation by a high multiplicity of external stakeholders, potentially initiating negative consequences for the visible firm. With growing attention from the public, the probability increases that a significant number of informed observers will intensify their evaluations and critically assess the self-representations of firms and draw public attention to potential inconsistencies. As a result, highly visible firms that symbolically adopt a wide range of potentially conflicting managerial practices might appear to be less credible. In line with this, Sutton and Galunic (1996, p. 12) argue that facing high levels of public scrutiny frequently implies being forced to answer "questions about what has happened, is happening, will happen, and why." For highly visible firms, symbolic adoption of a larger number of organizational practices should thus imply greater efforts in commenting on and resolving inconsistencies between practices as well as justifying adoption per se.

Taken together, these arguments suggest that a nonlinear relationship exists between a firm's media visibility and its symbolic adoption behavior: Firms with *low* visibility should not engage in symbolic adoption because they cannot expect positive effects from these actions. Firms with *medium* visibility might be strong symbolic adopters because (1) they have the attention that is necessary to profit from symbolic adoption, (2) the risk of losing credibility by symbolically adopting potentially conflicting practices is rather low, and (3) they are not sufficiently represented by external sources to establish a strong public image that could make symbolic adoption efforts obsolete. Highly visible firms, however, should be more reluctant to embrace symbolic adoption than firms with medium visibility, because symbolic adoption involves difficulties in explaining inconsistencies between adopted practices and because their self-representation efforts might oftentimes be replaced by external representations of the firm. With respect to the symbolic adoption of organizational practices, we thus propose the following hypothesis:

Hypothesis 7: An inverted u-shaped relationship exists between the visibility of a company and the engagement in symbolic adoption of popular organizational practices.

3.3 Approach, data and methods

3.3.1 Organizational websites as objects of investigation

Prior work on organizational self-representations has mainly concentrated on annual reports, CSR reports, or press releases to assess symbolic adoption of management practices. We chose organizational self-representations on the Internet as objects of investigation for several reasons. First, the Internet is gaining importance as a means of organizational communication in both the organizations' and their addressees' views (Fischer & Wenzel, 2003). Thus, organizational websites serve as powerful means for establishing and maintaining relationships with relevant stakeholders and presenting the organization to external and internal observers (Pollach, 2005). Second, since traditional media like annual reports mainly address a relatively homogeneous set of stakeholders, it can be expected that demands stemming from these stakeholders are mainly addressed by referencing specific organizational practices encapsulating principles and ideas that address these demands. In contrast, the Internet as a communication channel is characterized by the explicit openness to the whole multiplicity of interest groups across social contexts— owners, suppliers, competitors, customers, employees, the state, or the public in general. This accessibility to a large number of different stakeholders may hinder customized communication and concurrently support generalized communication, especially since organizations can only partly influence which stakeholder groups access which part of the homepage. Organizational websites thus represent a viable medium for assessing how organizational practices are used to communicate with the entirety of an organization's stakeholders. Third, this fact might also have implications for traditional media like annual reports that have frequently been used to assess symbolic adoption in prior research: Because these traditional media are increasingly integrated into a firm's web presences, possibilities for target-group-specific communication gradually decrease because access for a larger variety of stakeholders becomes more convenient. Assessing complete organizational websites might therefore help us better understand general changes in the way organizations symbolically adopt popular organizational practices.

3.3.2 References to organizational practices on organizational websites

One central challenge to assessing symbolic adoption is deciding what actually constitutes adoption. We thus assume that a firm that addresses a certain organizational practices on its website attempts to establish an informational linkage between its internal operations and the practice that is mentioned (Staw & Epstein, 2000). We argue that references to organizational practices on companies' websites can be regarded as instances of symbolic adoption. We suggest that the intensity of symbolic adoption can be measured by two major indicators: First, the mere number of referenced practices should reflect a firm's engagement in symbolic adoption. Second, taking into account that some organizational practices can display high similarities belonging to the same niche of practices—such as the niche for employee-management or quality-oriented practices (Abrahamson & Fairchild, 1999) – we argue that the *degree of diversity* of referenced organizational practices is a second indicator of the intensity of symbolic adoption. Since organizational practices from different niches often stem from different organizational areas and address demands of different stakeholder groups, adopting multiple practices from different niches may initiate internal and external conflicts and disputes while the adoption of several practices from the same niche might be less problematic. For instance, while firms simultaneously adopting shareholder value management and corporate social responsibility might face strong pressure to justify how potential conflicts between these two practices are resolved, public scrutiny should be less intense with regard to the simultaneous adoption of shareholder value management and corporate governance—two practices that appear to be complementary in terms of principles and rules since they both belong to the shareholder-oriented niche. As a result, firms referring to a heterogeneous set of practices from different niches on their websites can be said to engage more strongly in symbolic adoption.

To account for these two indicators of the intensity of a firm's symbolic adoption—number and heterogeneity of referenced organizational practices—we applied a three-step approach when identifying organizational practices for our study. First, based on an extensive review of literature dealing with the dissemination and/or adoption of organizational practices, we identified 56 organizational practices discussed in academic and practice-oriented articles and studies during approximately the last 25 years (see Figure 8).[11] Arguing that niches of practices can be identified according to the organizational problem they propose to resolve, our second step was to classify all 56 organizational practices by their underlying principles and major addressees.[12] We thus identified four niches of organizational practices for this study. The first niche of practices is comprised of organizational practices that primarily aim to increase effectiveness and/or efficiency of value chain processes and thus mainly address the very stakeholders involved in these processes—internal and external partners along the supply chain. The second niche includes those organizational practices that intend to strengthen the role of outside investors and their interests in wealth accumulation (investor-centered) and thus mainly address the needs of shareholders. In addition, especially during the last 10 to 15 years, a growing number of organizational practices have emerged that are designed to incorporate societal interests and values such as justice, equality, or family into business. These value-related practices comprise the third niche. Finally, organizational practices that can be subsumed under the theme "future orientation" and "innovation" are grouped in a fourth niche.

[11] As a basis for identifying currently relevant labels in management practice, we draw on the studies of Rigby (1993–2009). On behalf of the consulting agency Bain & Company, the author conducts an international manager survey investigating the spread and perception of popular management concepts every two years.

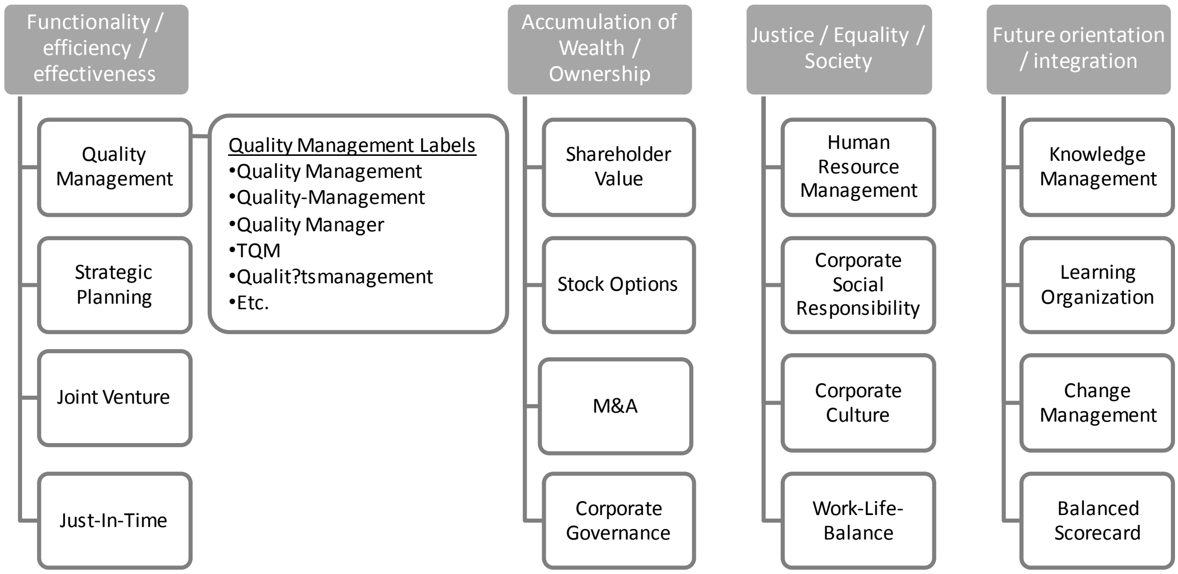
[12] Please note that our classification of organizational practices deviates from the classification in the first paper of this dissertation where we investigated theorization processes in academic and business press discourse. It was thereby necessary and useful to adopt the classification because the major addressees and audiences of discourses in the two papers differ. While in the first papers major audiences were academics, expert, consultants and managers, the audiences in the paper at hand are stakeholders of organizations. Due to the diverging interests and preferences of the different audiences we adapted the classification of organizational practices to different practice niches.

Figure 8: Fifty-six organizational practices (bold: 16 most prominent practices)

	Efficiency / effectiveness		**Acumulation of wealth / ownership**
1	**Strategic planning**	**1**	**Corporate governance**
2	**Quality management**	**2**	**Mergers & acquisitions**
3	**Joint venture**	**3**	**Stock option pay**
4	**Just in time**	**4**	**Shareholder value management**
5	Supply chain management		**Justice / Equality / Society**
6	Mission and vision statements	**1**	**Human resource management**
7	Strategic alliance	**2**	**Corporate social responsibility**
8	Continuous improvement	**3**	**Corporate culture**
9	Customer relationship management	**4**	**Work life balance**
10	innovation management	5	Pay for performance
11	Total quality management	6	Empowerment
12	Virtual corporations	7	Management by objectives
13	Business process reengineering	8	Diversity management
14	Core competences	9	Employee assistance programs
15	ISO 9000	10	Sensitivity training
16	Growth strategies	11	Job enrichment
17	Six sigma		**Future orientation / integration**
18	Outsourcing	**1**	**Knowledge management**
19	Lean production	**2**	**Learning organization**
20	Benchmarking	**3**	**Change management**
21	Virtual teams	**4**	**Balanced scorecard**
22	Scenario and contingency planning		
23	Network organizations		
24	Mass customization		
25	Quality circles		
26	Lean management		
27	Offshoring		
28	Activity based management		
29	Key account management		
30	Collaborative innovation		
31	Shared service centers		
32	Blue ocean strategy		
33	Loyalty management		
34	Agile strategies		
35	Horizontal corporations		
36	Open market innovation		
37	Consumer ethnography		

Aiming to reduce the large quantity of organizational practices to a smaller number that would be manageable within the scope of this study, we conducted a bibliometric analysis evaluating the relevance of all 56 identified practices in literature between 2003 and 2008 using GoogleScholar as a data source. Based on the results of this relevancy analysis, we chose the four most prominent organizational practices out of each niche to obtain 16 organizational practices, presented in Figure 9. By this means, we have made sure that we consider those organizational practices that are (1) modern but that (2) have already gained some momentum in theory and practice and (3) address expectations of a large fraction of stakeholders responsible for assigning legitimacy to organizations. Based on this classification, the number and heterogeneity of organizational practices referred to on a firm's website is expected to serve as an indicator for the intensity of symbolic adoption.

Figure 9: Sixteen organizational practices



3.3.3 Data collection

We test our theoretical framework empirically by assessing symbolic adoption on Internet self-representations of the 500 largest German companies according to revenues as described by *Die Welt*, one of the leading national German daily newspapers. To capture symbolic adoption of the set of organizational practices just described, we proceed as follows.

First, we identified the web URL of each company in our sample. Since a number of companies in our sample are not independent but are subsidiaries of other companies, we had to manually check whether each company had a separate identity on the Internet. All companies that did not have a separate self-representation on the web had to be excluded from our sample to avoid a mismatch between the independent and dependent variables. The need for this manual check results from the fact that some—especially large and multinational—corporations tend to unify their corporate identity by developing one major corporate website and forbidding their subsidiaries from developing an individual web presence and thus a recognizable web identity. A prototypical example for such a firm is the consumer electronics company Samsung Deutschland GmbH. Although the company offers product information on a dedicated German website, once a visitor wants access to company information (e.g., management, company profile), he or she is redirected to the global website of the parent company. This makes it impossible to separate Samsung Deutschland's (the company we are interested in and to which our independent variables apply) symbolic adoption activities from those of Samsung worldwide. By excluding companies like Samsung Deutschland from our sample, we thus make sure that key independent variables like size or visibility that exclusively relate to the specific subsidiary are not used to predict symbolic adoption activities of the firm's parent company. As a result of our manual checks for the existence of separate identities on the web, 99 firms that do not have a distinguishable self-representation had to be excluded from the analysis.

Second, we added all remaining company web URLs to a proprietary web crawler that scanned each website for outgoing links to other websites (for a more detailed description of this data collection technology, see Oberg, Schöllhorn, and Woywode (2009)). This second step is necessary because firms frequently possess not only one, but multiple web presences—like subsidiaries' or campaign websites, etc., that in sum constitute a focal company's self-representation on the Internet. This approach led to the exclusion of additional websites. Seventy-nine firms in our sample had websites with specifications that made it difficult or impossible to grasp them with the crawler (e.g., flash sites, automatic search engine exclusion). In total, we thus had to exclude 178 companies from the initial sample, resulting in a final sample size of 322 companies.

The scan of all web URLs for outgoing links resulted in more than 25,000 outgoing links for which we had to check manually whether the referenced website belonged to the company in our sample. For independent firms, we defined the boundaries of the self-representation of a firm on the corporate level, meaning that websites of subsidiaries, campaigns, or programs were included. For firms in our sample that are subsidiaries of other firms but were not excluded in the first step because they possessed a distinguishable web presence, we did not consider the self-representation of the parent company. Defining the boundaries of a firm's self-representation thus required a thorough consideration of corporate structures and ownership relationships to other firms. Those referenced websites that could not be assigned to one of the companies under study were not considered in the dataset. By this means, we obtained around 8,000 single URLs belonging to the companies in our sample that constitute the basis for our further analysis.

Finally, using the web crawler described above, we completely downloaded each of these more than 8,000 websites to a server, resulting in a dataset of more than 100,000 single (HTML) documents, each belonging to the Internet self-representations of the firms in our sample. This data format allowed us to apply an automated search engine to identify labels (or lists of issue markers (Meyer R. , 2004) indicating the reference to a certain organizational practice on each company's Internet self-representation. When developing respective search strings, we paid special attention to variations of notation, language, and syntax since an automated search is conducted (see Figure 9 for an example). As a result, we obtained a dataset of information on which practices were referenced on each company's Internet self-representation. This data serve as the basis for developing our dependent variables.

3.3.4 Dependent variables

We are interested in identifying antecedents of symbolic adoption of organizational practices and argue that reference to those practices on firms' websites can be regarded as an instance of symbolic adoption. We thus derive our dependent variables from the Internet self-representations of the firms in our sample. Considering the two indicators of the intensity of symbolic adoption as described above, two dependent variables are constructed.

(1) The ordinal (0-16) variable *number of practices* indicates the number of different management practices symbolically adopted by firms. As described above, for each practice we searched for a number of labels that indicate the reference to the respective practice. When a firm in our sample refers at least once to one or more of these labels on its website, we assume that the respective practice has been symbolically adopted (labels per practice are aggregated). We then count the number of practices that are referenced.

(2) The ordinal (0-4) variable *diversity of practices* refers to the number of different niches of practices referenced on a firm's website (labels per niche as shown in Figure 9are aggregated). For instance, a company referring to four organizational practices belonging to one niche will thus be assigned with a heterogeneity score of one, while a company that refers to four organizational practices belonging to four different niches will be assigned with a score of four.

3.3.5 Independent variables

Most independent variables are drawn from organizational characteristics. In this study, we investigate the symbolic adoption of organizational practices among both listed and non-listed firms. No database could be identified that provided a wide range of information on non-listed firms. Company characteristics were thus manually captured by relying on the databases Amadeus, LexisNexis, and Hoppenstedt, and were supplemented by information derived from firms' annual reports and websites.

Power constellations related to ownership.

Ownership data were obtained by using different databases (Amadeus, LexisNexis, and Hoppenstedt), annual reports, and company websites. Case by case, we assessed type of ownership, ownership structure, and share distributions of each firm in our sample. The two variables *family owner* and *public owner* take a value of 1 if one of the respective ownership groups holds 25% or more of the company shares and thus possesses a blocking minority (Becht & Röell, 1999) with regard to key decisions affecting the corporation and 0 otherwise. The binary variable *institutional owner* takes the value 1 if there is a mutual fund, private equity firm, insurance company, or investment company that holds 25% or more of the firm's shares.

Spanning social contexts.

To be able to test potential effects of a firm's *degree of diversification*, we develop a count variable that measures the number of one-digit SIC sectors a company operates in. This approach has been used by prior studies (Hoskisson, Hitt, Johnson, & Moesel, 1993). We obtained ownership data of each firm from the Hoppenstedt database.

Considering the *degree of internationalization*, we argue that establishment of subsidiaries in foreign countries is an advanced form of internationalization that requires a higher degree of commitment to foreign markets compared to, for instance, direct exporting, licensing, or strategic alliances (Johansen & Vahlne, 1977). The degree of internationalization is operationalized as a count variable indicating the number of different regions in which the focal firm holds a subsidiary. Based on Ronen and Shenkar (1985), we account for 11 regions—9 suggested by the authors and the two additional regions "Central and Eastern Europe" and "all other countries." The data were derived from annual reports and company websites for all firms in our sample. Moreover, we constructed the binary variable *listing* to classify whether a company is listed on the stock market (1) or not (0).

Visibility.

Media visibility of a firm is operationalized by assessing each firm's media coverage. We assessed media coverage by counting how many times a company was referenced in the German press during the two years prior to the year 2009 in which we collected symbolic adoption data using LexisNexis, which captures all major German newspapers, magazines, and trade journals as data sources. Thus, the database only provides the exact number of hits if it is lower than 3,000 (representing the upper limit for our data) (*visibility*). Arguing for a curvilinear relationship between a firm's visibility and its engagement in symbolic adoption, we also calculate the squared term of a firm's visibility (*visibility squared*).

We propose two potential mechanisms of public scrutiny that might lead to this curvilinear relationship: first, a reduced need for organizational self-representation due to a superior public image and, second, the avoidance of exposing inconsistencies that can be detected by critical observers. Although both mechanisms of public scrutiny might work in parallel—a firm might have a superior image while at the same time facing critical assessments—we attempt to untangle these potential mechanisms by constructing two proxy variables:

1. Image score: To understand whether firms with superior public imaged display specific symbolic adoption behavior, we develop a proxy variable for the strength of a firm's public image. We refer to a study conducted by one of the most established German business magazines, the *Manager Magazin*, which appears monthly with a print run of more than 100,000 (2011). Within the scope of this biennial study, 2,500 CEOs, managing directors, and

managers in leading positions make judgments about the images of large firms. Respondents are provided with lists of firms and are asked to evaluate the firms' images on a scale from 1 to 10 on several dimensions, including ethical behavior, innovation, customer orientation, management quality, and product and service quality. A firm's image score is calculated as the average of respondents' ratings multiplied by 100. The *image score* ranges from 491 to 893, indicating that all firms are perceived to have relatively strong imaged, although a certain variance in perceived image is still observable (www.manager-magazin.de, 2008). For firms in our sample that have not been evaluated in that study, the variable takes the value 0.

2. <u>Strike-bound:</u> To assess whether firms facing critical assessments display more hesitant symbolic adoption behavior, we investigate whether a firm’s visibility is characterized by rather negative media coverage. As the total number of media articles on the firms in our sample (approximately 200,000) obviates a qualitative assessment, we decided to use media coverage on strikes and warning strikes as a proxy that indicates whether the firm has experienced negative media coverage in the past. We deemed media coverage on strikes a viable proxy for negative media coverage for several reasons: Prior research indicates that certain characteristics of strike events—such as duration, degree of violence, or impact on the persons concerned—influence the news-worthiness of a strike and thus the likelihood of media attention (Martin, 2005). In other words, not all strike events are perceived and discussed in the media, but “the amount of media attention surrounding a strike is a function of the drama and human interest inherent in the event" (Flynn, 2000, p. 141). Accordingly, it has been shown that strike reports have a significant impact on public opinion (Schmidt, 1993). We would thus argue that firms that become subject to—mostly dramatic—media coverage on strike events face extraordinarily high levels of rather critical public scrutiny.

   To measure media coverage of firm-specific strike events, we develop a variable that indicates whether firms have been subject to strike-related media coverage in the year before we investigate their symbolic adoption efforts. We use the database Lexis Nexis to identify whether the firms in our sample have been strike-bound in the year 2008. We develop search strings consisting of the firms' names and labels indicating a strike.[13] Since press articles often refer to a number of different firms and topics, we manually checked all articles that we found to verify whether the respective firm was subject to reports of a strike. The variable *strike-bound* takes the value 1 when at least one article clearly indicates that there was a warning strike or an actual strike and 0 otherwise.

3.3.6 Control variables

To strengthen the insights of our study, we control for potential alternative explanations of the intensity of symbolic adoption. We thus develop a set of control variables derived from organizational characteristics. Unless otherwise noted, we used the same sources as for our independent variables.

<u>Firm size</u>: We capture *company size* referring to the traditional measure "number of employees." The natural log of the number of employees (*employees ln*) was used because the employee distribution in our sample is non-linear. Transforming employees to the log of employees thus allowed us to achieve a simpler linear structure, making the variable applicable for linear regression analysis.

<u>Industry:</u> Although many organizational practices have been translated to a larger number of industries and contexts, many have their origins in the manufacturing sector (e.g., Just-in-Time, total quality management, shareholder value management) and have been designed to streamline and organize manufacturing processes. It can thus be assumed that firms operating in these and related industries adopt practices more often. We developed binary variables indicating the major *industry* the company operates in. The industry classification is based on the first digit of the SIC-code (mining, manufacturing, construction, trade, financial services, other services)—with *manufacturing* being the reference category.

<u>Parent company:</u> We have stated that in our effort to correctly define the boundaries of firms' self-representations, we had to exclude some firms from our initial sample that are not independent firms but rather are subsidiaries of other firms. Those subsidiaries did not have an individual, recognizable self-representation on the web; instead, all company information is provided on the website of the

[13] List of labels: Streik, Arbeitskampf, Warnstreik. We include warning strikes because we argue that these forms of protest already influence a firm's behavior, which is also supported by the fact that disputes are mostly resolved after warning strikes and thus actual strikes only rarely occur.

parent firm. However, it can still be argued that independent firms differ from dependent firms when it comes to organizational self-representation and thus symbolic adoption. Parts of the self-representation efforts of subsidiaries might be assumed by the respective parent company, e.g., when it comes to overarching strategic initiatives. To control for this potential bias, we create a binary variable *parent company* that takes a value of 1 if the respective company is a subsidiary of another firm and 0 otherwise.

Foreign parent: To deepen the discussion on independent versus dependent firms, we also control for whether a firm is a subsidiary of a foreign parent firm. To do so, we generate a binary variable that is coded "1" if the respective company has a parent company outside of Germany and "0" otherwise to operationalize foreign ownership (*foreign parent*).

Listed parent: To further scrutinize how a parent company might influence its subsidiaries, we included a binary variable indicating whether the parent firm is listed on the stock market (*listed parent*).

Unionization: Employee influence may complicate symbolic adoption of modern organizational practices both when symbolic and substantive adoption is strongly coupled and when internal processes and activities are not adapted to formal structures. In the case of strong coupling, substantive adoption often initiates considerable organizational change, including the redistribution of responsibilities and competencies, and may thus lead to employee resistance—especially when a multitude of potentially conflicting practices is implemented. In the case of decoupling, some employees may become strongly committed to symbolically adopted practices. The situation in which these practices are not substantively implemented may thus cause cognitive dissonances for these employees, potentially initiating internal conflicts and disputes. To capture employee influence, we refer to the degree of employee *unionization of works councils* “measured as the percentage of works council seats captured by union representatives in a firm’s corresponding industry” (Fiss & Zajac, 2006, p. 1181) (*unionization*). As already argued by Fiss and Zajac (2006; 2004), works councils are the principal employee representation body in German firms. To capture the degree of unionization, we used data on the works councils elections in 2006 gathered by the Institut der Deutschen Wirtschaft in Cologne.

3.4 Results

3.4.1 Descriptive findings

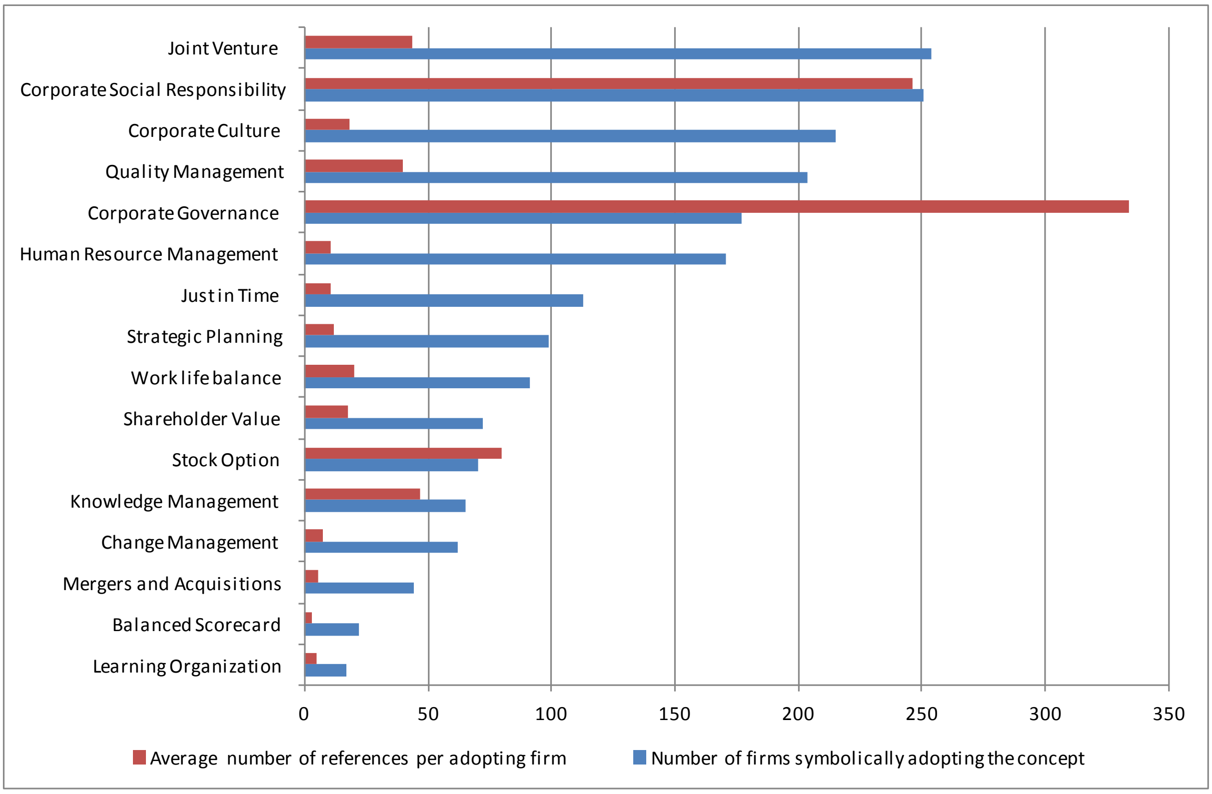
Table 9: Descriptive statistics and correlations shows descriptive statistics and correlations for all dependent and independent variables. The data show that average firms refer to five organizational practices belonging to between two and three practice niches on their websites. Despite the fact that some significant correlations are observable between independent variables, our calculation of variance inflation factors (VIF) did not reveal multicollinearity problems for the independent variables in the model, all values were far below the critical value of 10 (Hoang & Rothaermel, 2005).

As shown in Figure 10, organizational practices considered in this study strongly differ with regard to their popularity as measured by the number of firms symbolically adopting these practices. While practices such as joint venture, corporate social responsibility, corporate culture, and quality management are symbolically adopted by far more than 50% of the firms in our sample, other practices seem have symbolically diffused much less (e.g., learning organization, balanced scorecard). Figure 10 also shows that significant differences are observable with regard to the frequency with which organizational practices are referred to by an average adopting firm. While some practices are intensely discussed on the websites of average firms (e.g., corporate social responsibility, corporate governance, knowledge management), other practices are named only a few times (e.g., human resource management, just-in-time). These observations indicate that practices differ in terms of their symbolic value, meaning that some are regarded as either more appealing or more important than others when it comes to showing conformity with political and social debates (e.g., corporate social responsibility, corporate governance, or stock options).

Table 9: Descriptive statistics and correlations

		Mean	S.D.	Min	Max	Sum	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
(1)	Number of concepts	5.193	3.204	1.000	15.000		1.000																								
(2)	Diversity of concepts	2.550	1.053	1.000	4.000		0.865	1.000																							
							(0.000)																								
(3)	Family owner	0.289	0.454	0.000	1.000	93	-0.184	-0.170	1.000																						
							(0.001)	(0.002)																							
(4)	Public owner	0.078	0.268	0.000	1.000	25	-0.057	-0.085	-0.185	1.000																					
							(0.305)	(0.126)	(0.001)																						
(5)	Institutional Owner	0.031	0.174	0.000	1.000	10	0.045	0.060	0.004	-0.052	1.000																				
							(0.419)	(0.286)	(0.937)	(0.353)																					
(6)	Listing	0.230	0.421	0.000	1.000	74	0.274	0.283	-0.022	0.035	0.200	1.000																			
							(0.000)	(0.000)	(0.689)	(0.536)	(0.000)																				
(7)	Diversification	3.158	1.685	1.000	6.000		0.155	0.112	0.091	0.028	0.026	0.190	1.000																		
							(0.005)	(0.044)	(0.104)	(0.618)	(0.646)	(0.001)																			
(8)	Degree of internationalization	4.143	3.825	0.000	11.000		0.263	0.202	0.141	-0.132	0.176	0.395	0.273	1.000																	
							(0.000)	(0.000)	(0.011)	(0.017)	(0.002)	(0.000)	(0.000)																		
(9)	Firm size - Employees (ln)	9.025	1.537	2.960	12.890		0.327	0.298	0.094	-0.032	0.088	0.260	0.213	0.439	1.000																
							(0.000)	(0.000)	(0.090)	(0.568)	(0.113)	(0.000)	(0.000)	(0.000)																	
(10)	Media visiblity	0.000	9.719	-6.162	23.838		0.355	0.310	-0.031	0.091	0.108	0.521	0.163	0.338	0.509	1.000															
							(0.000)	(0.000)	(0.578)	(0.104)	(0.054)	(0.000)	(0.003)	(0.000)	(0.000)																
(11)	Media visiblity squared	94.158	171.178	0.000	568.270		0.291	0.239	-0.015	0.085	0.006	0.416	0.140	0.281	0.420	0.925	1.000														
							(0.000)	(0.000)	(0.793)	(0.130)	(0.922)	(0.000)	(0.012)	(0.000)	(0.000)	(0.000)															
(12)	Listing X Media visibility	2.128	6.868	-6.162	23.838		0.343	0.281	-0.054	0.084	0.015	0.568	0.208	0.306	0.378	0.775	0.813	1.000													
							(0.000)	(0.000)	(0.333)	(0.134)	(0.793)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)														
(13)	Strike in 2008	0.137	0.344	0.000	1.000		0.211	0.170	-0.094	0.054	-0.019	0.127	0.054	0.120	0.247	0.215	0.218	0.213	1.000												
							(0.000)	(0.002)	(0.092)	(0.338)	(0.733)	(0.023)	(0.335)	(0.031)	(0.000)	(0.000)	(0.000)	(0.000)													
(14)	Strike X Media visibility	0.717	5.020	-6.162	23.838		0.081	0.094	-0.022	0.066	0.060	0.298	0.057	0.118	0.223	0.527	0.542	0.522	0.359	1.000											
							(0.146)	(0.093)	(0.696)	(0.238)	(0.287)	(0.000)	(0.306)	(0.034)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)												
(15)	Image value	172.425	297.519	0.000	893.000		0.249	0.250	-0.002	-0.003	0.057	0.395	0.224	0.233	0.392	0.536	0.455	0.494	0.102	0.291	1.000										
							(0.000)	(0.000)	(0.977)	(0.960)	(0.308)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.068)	(0.000)											
(16)	Image value X Media visibility	1545.354	4985.701	-4057.267	21287.707		0.302	0.254	-0.023	0.109	0.054	0.486	0.169	0.364	0.447	0.814	0.828	0.827	0.202	0.491	0.545	1.000									
							(0.000)	(0.000)	(0.685)	(0.050)	(0.331)	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)										
(17)	SIC 1 - Mining and construction	0.022	0.146	0.000	1.000	7	-0.042	-0.037	-0.095	-0.043	0.096	0.070	0.100	0.100	0.037	0.041	-0.007	0.032	-0.059	-0.021	0.045	0.046	1.000								
							(0.450)	(0.503)	(0.089)	(0.439)	(0.085)	(0.208)	(0.073)	(0.072)	(0.507)	(0.467)	(0.902)	(0.569)	(0.289)	(0.703)	(0.418)	(0.410)									
(18)	SIC 4 - Transport and public utilities	0.193	0.395	0.000	1.000	62	0.000	-0.001	-0.207	0.476	-0.087	-0.061	-0.102	-0.171	-0.110	0.031	0.053	-0.007	0.127	0.044	-0.071	-0.035	-0.073	1.000							
							(0.998)	(0.991)	(0.000)	(0.000)	(0.117)	(0.277)	(0.067)	(0.002)	(0.049)	(0.583)	(0.341)	(0.906)	(0.023)	(0.430)	(0.201)	(0.534)	(0.193)								
(19)	SIC 5 - Trade (wholesale and retail)	0.220	0.415	0.000	1.000	71	-0.261	-0.221	0.107	-0.154	-0.052	-0.130	-0.148	-0.255	-0.162	-0.062	-0.042	-0.110	-0.146	-0.019	-0.089	-0.075	-0.079	-0.260	1.000						
							(0.000)	(0.000)	(0.054)	(0.006)	(0.352)	(0.019)	(0.008)	(0.000)	(0.004)	(0.267)	(0.456)	(0.050)	(0.009)	(0.741)	(0.111)	(0.179)	(0.156)	(0.000)							
(20)	SIC 6 - Finance, Insurance, RE	0.056	0.230	0.000	1.000	18	-0.048	-0.024	0.024	-0.071	-0.044	-0.069	0.049	-0.030	-0.024	-0.067	-0.042	-0.035	-0.097	-0.035	-0.015	-0.027	-0.036	-0.119	-0.129	1.000					
							(0.386)	(0.663)	(0.669)	(0.206)	(0.436)	(0.219)	(0.377)	(0.588)	(0.665)	(0.230)	(0.455)	(0.531)	(0.083)	(0.534)	(0.793)	(0.630)	(0.517)	(0.033)	(0.020)						
(21)	SIC 7/8 - Services	0.068	0.253	0.000	1.000	22	0.088	0.069	-0.037	-0.079	0.022	0.028	-0.172	0.032	0.040	-0.041	-0.072	-0.037	-0.072	-0.051	-0.095	-0.042	-0.040	-0.132	-0.144	-0.066	1.000				
							(0.117)	(0.216)	(0.511)	(0.160)	(0.688)	(0.621)	(0.002)	(0.570)	(0.476)	(0.459)	(0.201)	(0.509)	(0.198)	(0.366)	(0.088)	(0.456)	(0.470)	(0.018)	(0.010)	(0.238)					
(22)	Unionization	0.504	0.188	0.195	0.901		0.129	0.083	-0.033	0.168	0.080	0.060	0.131	0.187	0.014	-0.043	-0.024	0.041	0.087	-0.013	-0.046	0.020	0.085	0.008	-0.400	-0.053	-0.281	1.000			
							(0.020)	(0.138)	(0.551)	(0.003)	(0.154)	(0.282)	(0.018)	(0.001)	(0.801)	(0.446)	(0.669)	(0.463)	(0.120)	(0.812)	(0.412)	(0.717)	(0.126)	(0.891)	(0.000)	(0.339)	(0.000)				
(23)	Parent company	0.233	0.423	0.000	1.000	75	-0.088	-0.092	-0.124	0.032	-0.099	-0.214	-0.152	-0.092	-0.034	-0.100	-0.087	-0.130	0.144	-0.070	-0.234	-0.107	-0.032	0.234	0.044	-0.038	0.026	-0.114	1.000		
							(0.114)	(0.098)	(0.026)	(0.563)	(0.077)	(0.000)	(0.006)	(0.100)	(0.549)	(0.074)	(0.118)	(0.020)	(0.009)	(0.210)	(0.000)	(0.054)	(0.570)	(0.000)	(0.435)	(0.495)	(0.648)	(0.041)			
(24)	Foreign parent	0.205	0.404	0.000	1.000	66	0.094	0.115	-0.239	-0.090	-0.091	-0.131	-0.094	-0.367	-0.190	-0.170	-0.107	-0.131	-0.068	-0.030	0.066	-0.192	0.030	-0.053	0.027	0.010	-0.016	-0.008	-0.280	1.000	
							(0.091)	(0.039)	(0.000)	(0.108)	(0.103)	(0.019)	(0.094)	(0.000)	(0.001)	(0.002)	(0.056)	(0.019)	(0.226)	(0.590)	(0.235)	(0.001)	(0.594)	(0.345)	(0.631)	(0.853)	(0.781)	(0.892)	(0.000)		
(25)	Listed parent company	0.360	0.481	0.000	1.000	116	0.030	0.051	-0.321	-0.000	-0.134	-0.241	-0.182	-0.358	-0.244	-0.193	-0.122	-0.185	0.078	-0.048	-0.130	-0.232	0.021	0.208	-0.025	0.015	-0.075	-0.023	0.428	0.597	1.000
							(0.596)	(0.365)	(0.000)	(0.998)	(0.016)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.029)	(0.001)	(0.162)	(0.390)	(0.019)	(0.000)	(0.704)	(0.000)	(0.660)	(0.795)	(0.179)	(0.685)	(0.000)	(0.000)	

Figure 10: Diffusion of single practices



3.4.2 Tobit-regressions

Since both our dependent variables are left- and right-censored because they can range from 0 to 16 as well as from 0 to 4, the appropriate estimation technique in our case is a tobit regression (Tobin, 1958). We test our hypotheses using the tobit estimation procedure provided by the software package Stata 10. Taking into account that the pseudo R-squared calculated by the software has a very limited explanatory power and is only interpretable in a comparative manner, we manually calculated a proxy R-squared as the squared correlation coefficient of the predicted and the observed values of the dependent variables (Long & Freese, 2006). In the following we describe the results for the tobit regression models predicting symbolic adoption rate of the 16 organizational practices under study.

Table 10: Tobit regression models for *number of practicess*

		mod1	mod2	mod3	mod4	mod5	mod6	mod7	mod8
Power constellations related to ownership structure	Family owner	-1.502***	-1.532***	-1.514***	-1.387***	-1.278***	-1.206***	-1.101***	-0.980**
		(0.001)	(0.000)	(0.000)	(0.001)	(0.002)	(0.004)	(0.009)	(0.017)
	Public owner	-1.927**	-2.065**	-1.728**	-1.864**	-2.042***	-2.085***	-2.120***	-2.035***
		(0.017)	(0.011)	(0.033)	(0.020)	(0.010)	(0.008)	(0.006)	(0.008)
	Institutional owner	0.257	0.331	0.112	-0.230	-0.210	-0.639	-0.442	-0.194
		(0.806)	(0.750)	(0.914)	(0.823)	(0.835)	(0.533)	(0.664)	(0.846)
Spanning social contexts	Degree of internationalization		0.273**	0.231**	0.212*	0.211*	0.214*	0.189*	0.182*
			(0.018)	(0.045)	(0.063)	(0.058)	(0.054)	(0.086)	(0.094)
	Diversification			0.152**	0.112*	0.101*	0.110*	0.119**	0.112*
				(0.012)	(0.069)	(0.093)	(0.068)	(0.047)	(0.058)
	Listing				1.214**	0.465	0.292	-0.263	-0.291
					(0.011)	(0.364)	(0.572)	(0.642)	(0.600)
Visibility	Media visiblity					0.082***	0.181***	0.195***	0.221***
						(0.001)	(0.001)	(0.001)	(0.000)
	Media visiblity squared						-0.006**	-0.009***	-0.009***
							(0.050)	(0.004)	(0.005)
Interaction terms	Listing X Media visibility							0.112**	0.138***
								(0.020)	(0.008)
	Strike in 2008								1.294**
									(0.018)
	Strike X Media visibility								-0.136***
									(0.001)
	Image value								-0.000
									(0.513)
	Image value X Media visibility								0.000
									(0.964)
Control variables	Firm size - Employees (ln)	0.825***	0.785***	0.672***	0.638***	0.418***	0.377***	0.364**	0.308**
		(0.000)	(0.000)	(0.000)	(0.000)	(0.004)	(0.010)	(0.012)	(0.034)
	SIC 1 - Mining and construction	-2.699**	-2.904**	-3.037**	-3.046**	-3.079**	-3.314***	-3.420***	-3.310***
		(0.035)	(0.022)	(0.016)	(0.014)	(0.012)	(0.007)	(0.005)	(0.006)
	SIC 4 - Transport and public utilities	0.175	0.368	0.516	0.528	0.384	0.444	0.557	0.531
		(0.771)	(0.543)	(0.391)	(0.374)	(0.511)	(0.445)	(0.335)	(0.351)
	SIC 5 - Trade (wholesale and retail)	-1.475**	-1.246**	-0.985*	-0.953*	-1.061*	-1.007*	-0.910	-0.805
		(0.010)	(0.031)	(0.089)	(0.095)	(0.059)	(0.071)	(0.101)	(0.141)
	SIC 6 - Finance, Insurance, RE	-0.974	-0.967	-0.797	-0.656	-0.577	-0.484	-0.464	-0.281
		(0.240)	(0.240)	(0.329)	(0.417)	(0.467)	(0.539)	(0.552)	(0.714)
	SIC 7/8 - Services	0.781	1.214	1.191	1.201	1.428*	1.427*	1.418*	1.439*
		(0.343)	(0.147)	(0.151)	(0.142)	(0.076)	(0.075)	(0.074)	(0.068)
	Unionization	1.415	1.518	1.237	1.411	1.870	2.071*	2.013*	1.816
		(0.237)	(0.202)	(0.295)	(0.227)	(0.105)	(0.072)	(0.078)	(0.107)
	Parent company	-1.016	-0.931	-0.756	-0.489	-0.261	-0.281	-0.307	-0.458
		(0.163)	(0.198)	(0.293)	(0.495)	(0.711)	(0.688)	(0.659)	(0.501)
	Foreign parent	0.122	0.163	0.701	0.809	1.065	1.159	1.197	1.385*
		(0.887)	(0.848)	(0.421)	(0.348)	(0.209)	(0.170)	(0.153)	(0.095)
	Listed parent company	0.778	0.857	0.814	0.787	0.596	0.652	0.730	0.665
		(0.317)	(0.268)	(0.288)	(0.298)	(0.422)	(0.377)	(0.319)	(0.355)
	Constant	-2.369	-3.073**	-2.666*	-2.597*	-0.642	0.085	0.407	0.964
		(0.121)	(0.047)	(0.083)	(0.088)	(0.685)	(0.958)	(0.800)	(0.543)
	Observations	322	322	322	322	322	322	322	322
	R2	0,2378	0,248	0,2633	0,2822	0,3106	0,3186	0,3309	0,3613

pval in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Number of practices.

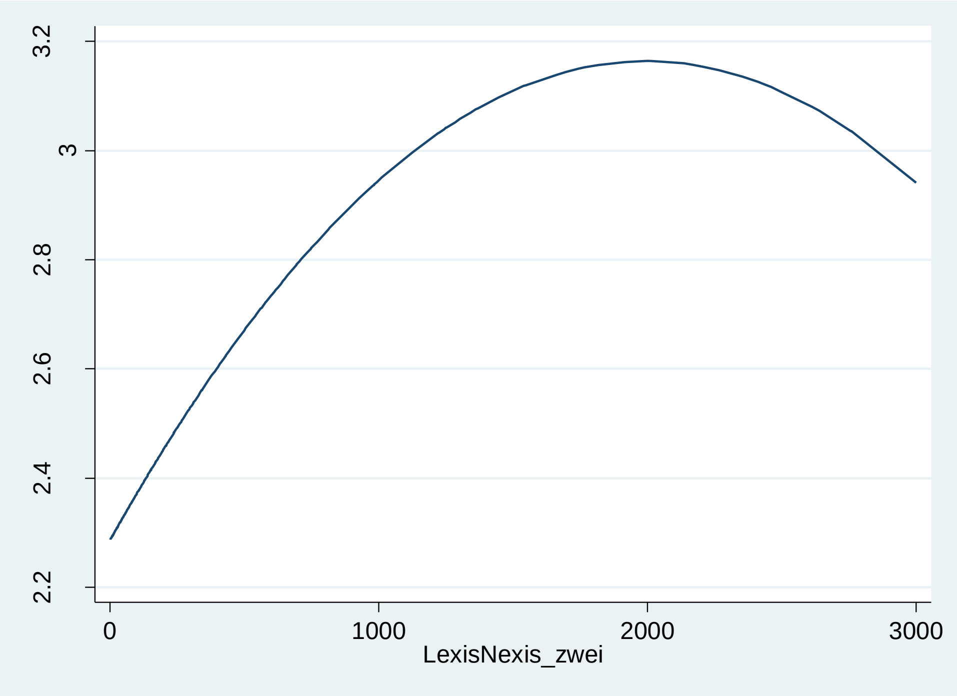
In Table 10, we present results from our tobit models predicting the *number of practices* a firm symbolically adopts by referencing them on its website. In Model 1, we test for the influence of power constellations related to ownership structure, and we observe significant effects for two of the three independent binary variables. In line with Hypotheses 1 and 2, firms with a dominant *family* or *public owner* symbolically adopt significantly less practices compared to firms with other or no dominant owners. In contrast, firms that have *institutional owners* holding 25% or more of the company shares do not symbolically adopt more practices than firms with other or no dominant owners. To scrutinize the relationship between institutional ownership and symbolic adoption, we also tested other thresholds of dominant ownership (10%, 5%), and we included the share owned by institutional investors as a metric variable. For none of these variables we could observe a significant effect. This finding contradicts our expectation as formulated in Hypothesis 3. Taken together, our results indicate that some power constellations related to ownership structures have significant effects on engagement in symbolic adoption of organizational practices.

The effects of variables indicating whether a firm operates in different contexts are tested in Models 2 to 4. The variable indicating the influence of international markets on the number of organizational practices mentioned on companies' websites is included in Model 2. We observe that with growing *degree of internationalisation*, firms increasingly engage in symbolically adopting modern organizational practices. This observation supports Hypothesis 5. In Model 3, we test for the effect of the *degree of diversification*. We find support for hypothesis 4: A firm's degree of diversification has a positive and significant effect on the number of practices it symbolically adopts. Firms operating in a larger number of industries and/or regions thus seem to address the various demands they face by using the standardized language provided by modern management.

In Model 4, we test the potential influence of a firm's listing status. We therefore include a binary variable indicating whether a firm is listed on the stock market or not. The results provide some support for Hypothesis 6 in which we expected that listed firms should engage more strongly in symbolic adoption, due to—among others issues—greater pressure to conform to demands for rationality and progressiveness on the stock market than in other social contexts. However, we cannot convincingly confirm Hypothesis 6 at this point since the effect of *listing* falls below significance when other variables are added. We discuss this in more detail below. In sum, we find support for most hypothesized relationships between factors indicating whether firms span social contexts and symbolic adoption behaviour.

In Models 6 and 7, we test Hypothesis 7, which posits an inverted u-shaped relationship between *media visibility* and symbolic adoption of modern organizational practices. We find support for our hypothesis: As Model 5 indicates, a significant positive relationship exists between visibility and symbolic adoption. When including the squared term in Model 6, this effect remains significant, and the squared term is negative and significant, pointing to an inverted u-shaped relationship. We plot this effect in Figure 11. Taken together, our observations support the proposition that high visibility does enhance but also delimit firms' potential of symbolic management.

Figure 11: Inverted u-shaped relationship between visibility and symbolic adoption



When adding the media visibility variables, we observe that the listing effect is no longer significant. This observation calls into question the argument that firms span social contexts when going public. To develop a better understanding of how these two variables interact, we calculate an interaction term by multiplying *listing* by *media visibility*. The significant and positive effect of the interaction term as observed in Model 7 shows that the visibility effect is stronger for listed than for non-listed firms. This result indicates that listed firms do not face greater pressure to conform per se. Only when they are highly visible in the mass media do demands for appearing rational and progressive seem to translate into a stronger engagement in symbolic adoption of popular organizational practices compared to non-listed firms.

We have identified two potential explanations for why media visibility would have a curvilinear effect on symbolic adoption efforts. First, highly visible firms face higher public scrutiny and thus a higher risk that inconsistencies will be detected and sanctioned. An alternative explanation for the curvilinear effect of media visibility might be that for firms with strong and positive images, it is not necessary that they strongly engage in symbolic adoption, because their progressiveness and modernity have become a myth that is constantly reproduced without further effort on their parts. To scrutinize our theoretically derived explanations, we introduce two additional variables representing proxies for public image and the existence of critical media attention.

When introducing the variable *strike-bound*, we see that firms that have been subjected to media coverage of strike events—be it warning strike or a substantial strike—refer to a larger number of organizational practices on their websites than firms that have not been subject to publicly visible collective actions. After experiencing a potentially reputation-threatening event such as a labor dispute, firms thus seem to engage more strongly in symbolic adoption of popular organizational practices.[14] However, this effect does not hold for highly visible firms, as is shown by the interaction between the strike-bound and the visibility variables (interaction term is calculated by multiplying *visibility* and *strike-bound*). The negative and significant effect of the interaction term indicates that the effect of media visibility is significantly weaker for strike-bound firms. Thus, firms that have *both* experienced negative public attention in prior periods and are highly visible seem to be much more reluctant when it comes to symbolic adoption of organizational practices. This observation supports our theoretical argument that highly visible firms might be more reluctant with respect to symbolic adoption because they fear appearing inconsistent when faced with public scrutiny.

To test for the second explanation of the curvilinear effect of visibility—namely, the potential influence of a firm's positive public image—we introduce a simple proxy variable for firm image and the interaction term between a firm's *image score* and its *media visibility* by multiplying the two variables. For none of the two variables we can identify a significant effect. Neither do firms with superior images display deviant symbolic adoption behavior compared to other firms, nor do firms that both enjoy positive public images *and* high visibility do so. Thus, the curvilinear effect of visibility does not seem to be caused by the fact that companies with strong images refuse to symbolically adopt

[14] Although our strike-bound variable is based on data taken from the year before we capture the firms' symbolic adoption efforts on their websites, we cannot fully rule out the possibility that the management concepts have already been adopted before the (warning) strikes took place.

organizational practices because their strong and positive image makes symbolic adoption needless. Our results rather indicate that decreasing openness toward organizational practices of highly visible firms is driven by the fear that inconsistencies that might result will be detected by their observers.

Diversity of practices

Table 11: Tobit regression models for *diversity of practices*

		mod1	mod2	mod3	mod4	mod5	mod6	mod7	mod8
Power constellations related to ownership structure	Family owner	-0.501***	-0.508***	-0.504***	-0.446***	-0.418***	-0.387**	-0.365**	-0.336**
		(0.002)	(0.001)	(0.001)	(0.004)	(0.007)	(0.011)	(0.017)	(0.028)
	Public owner	-0.783***	-0.813***	-0.734**	-0.797***	-0.838***	-0.854***	-0.862***	-0.855***
		(0.007)	(0.005)	(0.013)	(0.006)	(0.004)	(0.003)	(0.003)	(0.003)
	Institutional owner	0.179	0.194	0.142	-0.018	-0.002	-0.172	-0.131	-0.065
		(0.636)	(0.607)	(0.707)	(0.962)	(0.995)	(0.646)	(0.727)	(0.861)
Spanning social contexts	Degree of internationalization		0.064	0.054	0.046	0.045	0.046	0.041	0.039
			(0.120)	(0.190)	(0.265)	(0.265)	(0.253)	(0.308)	(0.326)
	Diversification			0.036*	0.018	0.015	0.019	0.021	0.018
				(0.098)	(0.420)	(0.487)	(0.391)	(0.343)	(0.408)
	Listing				0.553***	0.379**	0.307	0.194	0.185
					(0.001)	(0.042)	(0.101)	(0.345)	(0.364)
Visibility	Media visiblity					0.019**	0.060***	0.063***	0.067***
						(0.028)	(0.003)	(0.002)	(0.002)
	Media visiblity squared						-0.002**	-0.003**	-0.003**
							(0.027)	(0.010)	(0.012)
Interaction terms	Listing X Media visibility							0.023	0.026
								(0.189)	(0.179)
	Strike in 2008								0.320
									(0.112)
	Strike X Media visibility								-0.033**
									(0.035)
	Image value								-0.000
									(0.838)
	Image value X Media visibility								0.000
									(0.707)
Control variables	Firm size - Employees (ln)	0.266***	0.257***	0.230***	0.215***	0.164***	0.147***	0.144***	0.127**
		(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.006)	(0.006)	(0.018)
	SIC 1 - Mining and construction	-0.904*	-0.954**	-0.988**	-0.997**	-1.007**	-1.110**	-1.132**	-1.112**
		(0.052)	(0.040)	(0.033)	(0.028)	(0.026)	(0.014)	(0.012)	(0.014)
	SIC 4 - Transport and public utilities	0.126	0.171	0.205	0.211	0.177	0.201	0.225	0.230
		(0.561)	(0.432)	(0.346)	(0.322)	(0.404)	(0.339)	(0.286)	(0.275)
	SIC 5 - Trade (wholesale and retail)	-0.431**	-0.377*	-0.315	-0.300	-0.324	-0.301	-0.281	-0.250
		(0.036)	(0.068)	(0.132)	(0.143)	(0.111)	(0.137)	(0.165)	(0.216)
	SIC 6 - Finance, Insurance, RE	-0.210	-0.207	-0.165	-0.101	-0.084	-0.046	-0.042	0.002
		(0.479)	(0.484)	(0.576)	(0.728)	(0.771)	(0.872)	(0.883)	(0.995)
	SIC 7/8 - Services	0.199	0.301	0.295	0.300	0.351	0.351	0.349	0.369
		(0.499)	(0.317)	(0.325)	(0.306)	(0.228)	(0.225)	(0.226)	(0.204)
	Unionization	0.245	0.270	0.202	0.283	0.386	0.468	0.455	0.423
		(0.567)	(0.527)	(0.637)	(0.499)	(0.355)	(0.261)	(0.273)	(0.310)
	Parent company	-0.414	-0.393	-0.352	-0.229	-0.177	-0.186	-0.192	-0.231
		(0.112)	(0.131)	(0.177)	(0.373)	(0.489)	(0.463)	(0.449)	(0.360)
	Foreign parent	0.069	0.079	0.206	0.255	0.313	0.352	0.360	0.397
		(0.822)	(0.796)	(0.513)	(0.410)	(0.309)	(0.250)	(0.238)	(0.196)
	Listed parent company	0.283	0.302	0.293	0.282	0.239	0.263	0.280	0.272
		(0.311)	(0.279)	(0.292)	(0.301)	(0.376)	(0.326)	(0.296)	(0.309)
	Constant	0.168	0.001	0.098	0.127	0.582	0.882	0.947	1.088*
		(0.759)	(0.998)	(0.861)	(0.815)	(0.314)	(0.134)	(0.107)	(0.065)
	Observations	322	322	322	322	322	322	322	322
	R2	0,1173	0,181	0,1868	0,1972	0,2602	0,2717	0,276	0,2884

pval in parentheses
*** p<0.01, ** p<0.05, * p<0.1

We predict the *diversity of practices* that are symbolically adopted and show the results in Table 11. The results are to a large extent in line with the results for *number of practices*: We observe practically the same effects considering ownership characteristics (Hypotheses 1 to 3) and visibility (Hypothesis

7). We again observe that the listing effect is significant in the beginning but falls below significance when visibility variables are added. However, we do not see a significant effect of the interaction term (*visibility* multiplied by *listing*). Firms that are both listed and highly visible in the media thus do not reference organizational practices from more niches than their unlisted counterparts. Considering that listing should represent the strong influence of professional shareholders or the stock market in general, it is reasonable to argue that listed firms engage more strongly in symbolically adopting organizational practices in the shareholder-oriented niche (e.g., shareholder value management, corporate governance, stock options) while they would not necessarily differ from unlisted firms in their symbolic adoption of other organizational practices. Statistical comparisons of the average number of referenced practices from this group point to significant differences between listed and non-listed firms. On average, listed firms symbolically adopt two shareholder-oriented practices while an average non-listed firm symbolically adopts 0.6 shareholder-oriented practices. This observation contributes to explaining why we observe a higher number of referenced practices for listed than for non-listed firms, but not a larger number of niches of practices.

We do not observe significant and robust effects of the other two indicators of whether firms span social contexts, namely the degree of diversification and the degree of internationalization. Taken together, the regression results for the two dependent variables—number of practices and diversity of practices—indicate that firms operating in a larger number of industries and countries symbolically *adopt a larger number* of organizational practices but that the practices *do not belong to a more diverse* number of practice niches. We have argued that practices belonging to the same niche are related to similar organizational problems while organizational practices from different niches often stem from different organizational areas and address demands of different stakeholder groups. Relating these arguments to our observation considering the effects of the degree of diversification and of internationalization, we would conclude that the general organizational problems captured by practice niches—e.g., fulfilling demands for efficiency and effectiveness, gaining social approval—might not significantly differ internationally or across industries. This would explain why we do not observe an effect of the degree of internationalization or the degree of diversification on the diversity of practices. However, firms active in a multinational context or in various industries seem to address a larger diversity of slightly different issues *within* certain practice niches, thus resulting in a larger number of symbolically adopted organizational practices.

3.5 Discussion

3.5.1 Summary and contributions

In this paper, we asked why some firms refuse to engage in symbolic adoption of popular organizational practices, even though existing research suggests that symbolic adoption represents a relatively inexpensive approach to achieve social and economic gains. In our attempt to answer this question, we built a theoretical framework comprised of three types of antecedents of symbolic adoption— power constellations with respect to ownership structures, membership in diverging social contexts, and firm visibility. Empirically, we found that the involvement of certain ownership groups (e.g., families) seems to prevent organizational decision-makers from symbolically adopting popular organizational practices. In contrast, firms spanning social contexts (e.g., multinational firms) display a more active symbolic adoption behavior. Additionally, we found that firm visibility has a double-edged effect on symbolic adoption: Until a certain tipping point is reached, an increase in media visibility positively affects firms' engagement in symbolic adoption while firms with very high levels of visibility exhibit significantly more hesitant symbolic adoption behavior.

Referring to our question of why some firms do not engage in symbolic adoption of popular organizational practices, these results indicate that firms are restricted in their possibilities for profiting from symbolic adoption in at least two ways. First, firms that are confronted with rather conservative owner groups who are skeptical toward popular organizational practices are prevented from symbolically adopting these practices, even in a communication channel like the Internet that is not exclusively targeted at communicating with this stakeholder group. Second, firms that are highly visible to the public are not able to use the full scope of symbolic actions because they risk that potential inconsistencies will be detected by the high public scrutiny they face. With these findings, we are able to contribute to existing research in a number of ways.

Generally, our findings support and strengthen the argument that firms are political arenas in which power constellations influence not only organizational internal behavior (Cyert & March, 1963), but also the way organizations position themselves vis à vis outside stakeholders (Fiss & Zajac, 2004). We therefore enlarge existing insights on the influence of specific ownership constellations on symbolic adoption since we analyze a communication channel that is not destined to address the needs of owners and that has—to our knowledge—not been assessed by prior research. Prior work has focused on adoption data captured from annual reports (Palmer, Friedland, Devereaux, & Powers, 1987; Fiss & Zajac, 2004), which are primarily destined to address firm owners and might thus especially reflect their needs and preferences. Interestingly, although we assessed websites as a communication channel, our results that family and public ownership hamper symbolic adoption are largely in line with prior research. This finding confirms and extends prior work because it indicates that the influence of dominant owners on symbolic adoption expands beyond communication channels like annual reports and thus influences the way firms present themselves toward all their stakeholders.

Furthermore, our results coincide with recent calls in new institutional theory to further scrutinize processes of practice diffusion across boundaries of organizational fields—representing the traditional unit of analysis in institutional theory (Dacin, Goodstein, & Scott, 2002; Kostova, Roth, & Dacin, 2008). Current research often points to the importance of the positions of practice adopters in the field to explain how new organizational practices gain prominence: Centrally placed early adopters within fields serve as catalysts for practice diffusion. Our results indicate that in particularly, firms that are highly diversified, internationalized, or listed on the stock market and thus potentially face the challenge to conform to demands from different social contexts and thus different organizational fields exhibit an eminently active symbolic adoption behavior. Firms spanning various social contexts and fields, but not necessarily taking a central position within these fields, might thus incur an important role in practice diffusion as they "carry" knowledge and symbols provided by popular organizational practices from one field to the other. Future research on the diffusion of organizational practices might thus profit from a closer assessment of the role of organizations that span multiple fields.

With our finding that high visibility serves as a limiting factor for symbolic adoption, we extend insights from prior research based on organizational theory in which the relationship between a firm's visibility and the intensity of external exposure has been treated as rather simple or linear (Delmas & Montes-Sancho, 2010; Salancik, 1979). A similar assumption has been made by impression management theorists, who argue that with increasing visibility, firms actively intensify their self-representation and public relation efforts—as indicated, for instance, by the number of press releases or companies' statements (Carter, 2006; Meznar & Nigh, 1995). Our results point to a more nuanced theoretical argument: While exceptionally high and low levels of visibility seem to limit the scope of available and reasonable symbolic actions, medium levels of visibility seem to provide organizations with the chance to experiment with a broader scope of symbolic actions. Future work could build on these theoretical arguments and our empirical findings by assessing whether this double-edged effect of visibility in mass media as an antecedent of symbolic adoption might also translate into outcomes of symbolic adoption. The findings of this study thus suggest the following proposition: Particularly those organizations with *moderate* visibility should be able to profit from symbolic adoption because their symbolic actions will be observed by a considerable number of stakeholders and the consequences of appearing inconsistent are moderate. Future work could test this hypothesis.

Additionally, our results speak to recent work on so-called “celebrity firms” (Rindova, Pollock, & Hayward, 2006). Firms are described as celebrities when they simultaneously display two characteristics: First, celebrity firms are highly visible in mass media and, second, they receive positive emotional responses from their audiences. It has therefore been argued that celebrity may broaden the scope of viable symbolic reactions to environmental demands for firms. According to these arguments, celebrity allows firms to either comply or deviate from norms and standards without suffering from devaluation and delegitimation (Rindova, Pollock, & Hayward, 2006). Our results indirectly support and potentially refine this view. We show that visible firms engage less strongly in the symbolic adoption of organizational practices when they have received *negative* public attention. Vice versa, we show that visibility seems to have a positive effect on firms’ symbolic adoption of popular organizational practices in the *absence of negative attention*. In this view, public visibility might not necessarily have to be accompanied by positive emotional responses to allow for certain degrees of freedom with regard to potential strategies when facing pressures for conformity. Our results to some extent suggest that the absence of negative attention might be sufficient to guarantee a certain latitude to highly visible firms. This result might point to a more fine-grained understanding of firm celebrity compared to existing research.

We also enlarge existing insights on symbolic adoption by choosing a sample consisting of both listed and non-listed firms for our study. Current studies assessing outcomes and antecedents of symbolic and/or substantive adoption mainly focus on firms that are listed on the stock market for empirical quantitative assessments (Westphal & Zajac, 1994; Fiss & Zajac, 2006). This is not surprising because the availability of data for listed firms is much better than for unlisted firms—not least because of more rigorous reporting duties for listed firms. Nevertheless, as we have outlined, a number of arguments suggest that listed firms might significantly differ from non-listed firms in their symbolic management behavior. Although we do not observe a robust listing effect in all models, listed firms are shown to differ from non-listed firms when taking the firms' visibility into account. We show that the number of symbolically adopted organizational practices increases more with growing visibility for listed firms than for their non-listed counterparts. The almost exclusive assessment of listed firms in existing studies thus bears the risk that a lacking variance of important explanatory variables—such as firm visibility—leads to biased results. The study at hand helps confirm and extend prior work that has in part used similar explanatory variables, but mostly with a focus on firms that are listed on the stock market, and thus develops a theoretical model explaining symbolic adoption for a broader cross-section of firms.

Finally, with this study we are able to make a methodological contribution. To our knowledge, no prior study has collected and analyzed data on organizational self-representation and symbolic adoption on the Internet in a comparably extensive manner. Prior work has instead concentrated on specific communication channels targeted at specific stakeholder groups (e.g., annual reports). Nevertheless, as has been argued before, the Internet increasingly blurs the boundaries between stakeholder-specific media. Organizations are expected to present themselves in a more or less consistent way on the Internet. Gaining a deeper understanding of the way this shift in possibilities of and expectations toward organizational self-representation affects how organizations communicate with their internal and external environments represents a methodological challenge. The procedure for collecting complete organizational self-representations on the Internet described in this study might therefore constitute a basis for further studies.

3.5.2 Limitations and outlook

Despite the contributions to existing research we are able to make, our study has some limitations. Our current observations and analyses underlie technical limitations related to the current state of our web crawler. Some web servers were excluded because of technical restriction of data collection (e.g., availability of web servers, unsearchable content, automatic search engine exclusion). Another limitation derives from the automated scanning of text. Using a simple search technology that is capable of searching single strings, we had to ignore complex search terms that could identify practices even if they lack clear labels. According to the “interpretative viability” or “pragmatic ambiguity” of organizational practices described by many researchers (Benders & Van Veen, 2001; Giroux, 2006; Kieser, 1997), companies may choose individualized and unexpected specifications of organizational practices that cannot be captured by the search technology in its current state when none of the labels that have been predetermined by the authors appear. Hence, symbolic adoption of those organizations using very specific and strongly modified symbols and labels may not be observed by the software even though these very organizations may truly have translated practices to their specific organizational context and thus adapted internal structures to the ideas of this practice. We would argue, however, that despite the potential advantages of translating diffusing practices to individual contexts on the *substantive* level, the use of individualized instead of generally accepted labels might be less powerful when it comes to displaying conformity with demands for rationality and progress on the *symbolic* level.

Moreover, mainly relying on academic literature in combination with a bibliographic analysis when choosing the organizational practices investigated in this study restricts our analysis to those practices that have academic appeal. organizational practices that might have practical importance but have not been subject to academic discourse are ignored in this analysis. Finally, our insights are also limited by the fact that our study is based on cross-sectional data. Capturing potential changes in the symbolic adoption behavior over time—after, for instance, changes in the ownership structures (e.g., family-owned firm going public) or an intensification of international activities—would further strengthen and refine our arguments and insights.

Despite these limitations, the results of this study extend existing theoretical and empirical assessments of symbolic adoption of modern organizational practices in a number of ways. Besides the specific contributions already discussed, we would especially point to our theoretical arguments and findings on limits of symbolic adoption. In this study, we observe that a number of factors delimit an organization's possibilities for symbolic action. The theoretical arguments and empirical results of this study might serve as a starting point for developing a finer-grained theory on limits of symbolic action and thus a deeper understanding of factors that enable or constrain organizations in their abilities to profit from symbolic adoption.

4 Relationship quality or consulting firm features? When medium-sized companies recommend consulting firms

4.1 Introduction

Identifying and selecting an appropriate provider of professional services – and thereby especially of consulting services – can entail high search costs. Consulting services are intangible and customized applications of complex knowledge and are characterized by a high degree of uncertainty with regard to the provider's future performance (Greenwood, Li, Prakash, & Deephouse, 2005; Zeithaml, Parasuraman, & Berry, 1985). In addition, the consulting services market is characterized by a lack of formal institutions concerning, for instance, education and training of consultants or quality control processes (Clark, 1993; Hausman, 2003; Glückler & Armbrüster, 2003). From the perspective of consulting services customers, this lack of institutions and standards further increase uncertainty with regard to the expected service quality. Responding to these characteristics of consulting services and the consulting services market, large firms have objectified their purchasing processes not only with regard to products and industrial services but also concerning consulting services. Purchasing departments check the preferences of line managers and analyze the consulting services market before placing an order; standardized bidding procedures are used to structure selection processes and make them less dependent on the preferences of single managers.

Selection processes in medium-sized companies typically differ from those observable in large companies. In most cases, in medium-sized companies these processes are less structured and less objectified than in their larger counterparts. Due to a lack of internal expertise and more limited resource endowments, medium-sized companies are often not able to extensively evaluate service providers themselves and are more dependent on other information sources (File, Cermark, & Prince, 1994). Recommendations from business partners may thereby provide detailed information on the consulting services providers' identities and their expected behavior, thus contributing to reducing uncertainty concerning the quality of consulting services (Powell, 1990; Money, Gilly, & Graham, 1998; Bansal & Voyer, 2000; Gilly, Graham, Wolfinbarger, & Yale, 1998; DiMaggio & Louch, 1998).

When evaluating and selecting service providers, decision makers in medium-sized companies do not only rely on their own experiences and perceptions but their decisions are also influenced by information provided by third parties (Wong & Boh, 2010). As a result, they preferably cooperate with recommended partners of their business partners (Podolny, 1994; Gulati, 1995; Uzzi, 1996; Wong & Boh, 2010; Greve, Baum, Mitsuhashi, & Rowley, 2010). Recommendations seem to represent reliable and not very resource consuming information sources which are preferably used by medium-sized companies in order to avoid costly and extensive selection processes.

From the perspective of consulting firms aiming to develop and strengthen their medium-sized customer base, it seems reasonable to actively contribute to enlarging and deepening their recommendation network (Kotler & Connor, 1977; Ferrin, Dirks, & Shah, 2006; Kozinets, de Valck, Wojnicki, & Wilner, 2010). Generating recommendations is thus a self-declared goal of consulting firms and a central element of their marketing efforts (Zeithaml, Parasuraman, & Berry, 1985). There exists empirical evidence showing that those consulting firms are more successful with regard to attracting new customers which are able to generate a large number of recommendations (Ferrin, Dirks, & Shah, 2006; Barchewitz & Armbrüster, 2004; Glückler & Armbrüster, 2003). Taken together, from both the view of the consulting firm as well as from the view of the searching medium-sized company, recommendations represent the desirable and preferably used means to establish new business contacts.

But how do recommendations evolve in the consulting services market? It has already been shown that recommendations are initiated by satisfaction meaning that those customers are more likely to recommend a consulting firm to a business partner who have been satisfied with the consulting services provided by that firm. But is this the only influencing factor? When approaching this question on how to explain the development of recommendations, it has to be considered that a third actor is in this case involved in the development of a new business relationship between two actors in the consulting services market: in addition to the searching company and the consulting firm the recommending company is of key interest. From the embeddedness perspective it is thereby argued that by making recommendations, recommending companies contribute to the development of a new social relations. The decision whether to make recommendations or not should thus be made thoughtfully meaning that the own position in the network has to be considered since a “bad” recommendation might redound upon the recommending company. Consequently, satisfaction alone should not be sufficient to explain recommendation behavior. Following the social embeddedness perspective we would argue that factors characterizing the exchange relationship between the recommending medium-sized company and the consulting firm and characteristics of the consulting firm should in combination determine the recommendation behavior of medium-sized companies.

In the social embeddedness literature recommending companies are described as mediators of trust or go-betweens (Uzzi, 1996). They are able to develop a social relationship between to formerly unconnected actors. Two mechanisms should thereby be relevant for making recommendations: first, experience-based trust which derives from previous interactions between the recommending company and the recommended consulting firm (Powell, 1990; Zucker L. , 1986; DiMaggio & Louch, 1998) and, second, characteristic-based trust towards a consulting firm which may be evoked by characteristics of that firm – such as size or reputation – without previous interactions necessarily having taken place between the consulting firm and the recommending company (Greenwood, Li, Prakash, & Deephouse, 2005; Zucker, 1986).

In this study we aim to answer the following question: When do medium-sized companies recommend consulting firms? We approach this question using data from a quantitative survey of 137 medium-sized companies that have been customers of consulting firms within the last three years. The survey thereby contained questions regarding frequency with which recommendations are made, and questions addressing indicators for the existence of the two types of trust as described above – experience-based and characteristic-based. The expected relationships are tested using multinomial quantitative methods (multinomial regression models). We observe that recommendations are rather driven by experience-based trust than by characteristic-based thrust.

These insights allow us to develop a deeper understanding of the dynamics existing in the consulting services market which is characterized by a high fragmentation and, from the perspective of the customers, a high quality uncertainty. Empirical studies in the context of the consulting services market have shown that recommendations do play a central role for developing new business contacts, for internationalizing business activities and for achieving growth of the firm (Barchewitz & Armbrüster, 2004; Meffert H. , 1990; Kaas & Schade, 1995; Kohr, 2000; Strambach, 1995; Glückler, 2004; 2006). What has so far been neglected in these studies is under which conditions recommendations are made and which factors characterizing the relationship between recommending company and consulting firm may contribute to explaining recommendation behavior. With the existing study we contribute to closing this research gap. Existing studies assessing determinants of recommendation behavior have to a large extent concentrated on recommendation behavior of private persons (z.B. (Hausman, 2003; Johnson, Zinkhan, & Ayala, 1998)) or – when investigating determinants in the consulting services market – have focused on single influencing factors such as (dis-)satisfaction with the service provider (File, Cermark, & Prince, 1994; Mattila, 2005). The study at hand thus allows us to enlarge and detail our insights on determinants of recommendation behavior considering the specific context of the consulting services market.

The rest of the paper is structured as follows. We start with developing the theoretical arguments considering the role that trust plays in the development of recommendations and on this basis we develop hypotheses. These hypotheses are tested empirically based on the quantitative survey data outlined above. We then present the results of this study. We close the paper with a discussion of our observations including the limitations of our study and a description of potential avenues for future work in this field.

4.2 Theory development

4.2.1 Recommending companies as go-betweens

Recommendations are important for the development of business contacts in the consulting services market (Zeithaml, Parasuraman, & Berry, 1985; DiMaggio & Louch, 1998). It is thereby assumed that recommendations are made by existing customers of consulting firms meaning that the existing dyadic relationship between customers and consulting firms represents a prerequisite for the emergence of recommendations. A company making recommendations thereby serves as a go-between and fulfills two functions: (1) the company "transfers expectations of behavior from the existing embedded relationship to the newly matched firms, and (2) 'calls in' the reciprocity 'owed' [to the company] by one exchange partner and transfers it to the other" (Uzzi, 1996, p. 679). By recommending a consulting firm, go-betweens thus convey positive experiences, attitudes and perceptions (Burt & Knez, 1995) as well as behavioral norms and expectation structures (Granovetter, 1973; Simmel, 1992) concerning the recommended firm to the company receiving the recommendation. By this means, go-betweens are able to connect previously unconnected actors and thus to contribute to the development of new network relations.

From an embeddedness perspective, the probability for establishing a linkage between two unconnected actors increases when both have (strong) linkages to a common third party (Granovetter, 1973; 1985; Powell, 1990; Simmel, 1992). According to Heider (1977) a missing link in such a triadic constellation initiates emotional stress for the actor who is linked to both other actors. In an attempt to overcome this state of cognitive imbalance he will aim to contribute to creating a linkage between the unconnected actors and by this means to achieve triadic closure. This can be achieved by making a recommendation. In their decision whether to recommend or not, (potentially) recommending companies anticipate the development of the closed triad and are aware that they are perceived as the recommending actors – with all its consequences. To some extent, they vouch for the recommended firms – not legally, but with the relationship quality to the other two actors in the triad and with future business opportunities with these actors. Resulting from this, recommendations are made with caution. Taken together, companies, we argue, will only make recommendations when at least one of the two following circumstances are given: First, when the companies trust that the recommended consulting firm will perform well in future services, or, second, when the recommending companies can be sure that a poor performance of the consulting firm will not have negative consequences for them.

4.2.2 The role of trust for making recommendations

Recommendation behavior of medium-sized companies will mainly be influenced by the existing trust towards the potentially recommended consulting firm. Trust can thereby be defined as the positive expectation of the trustor regarding the future behavior of the trustee (Nooteboom, 1996; 2000; Hosmer, 1995; Dasgupta, 2000; Gambetta, 2000). Expecting "good" behavior can be driven by two types of trust production characterizing the relationship between medium-sized customer companies and consulting firms: First, the relationship can be coined by *experience-based trust* which is developed in positive former interactions. Second, *characteristic-based trust* can be traced back to characteristics of the consulting firm which indicate competence, integrity and professionalism (Zucker L. , 1986). [15]

Experience-based trust to some extent entails certainty concerning the performance of the service provider which is based on previous interactions with that provider – interactions in which the service provider performed well. Nooteboom (1996; 2000) describes experience as a most authentic way to anticipate future behavior and performance of a service provider. In this view, experience represents the expectation „that damage will not be caused even though there is both an opportunity and an incentive for the partner to cause damage" (Nooteboom, 2000, p. 921). With regard to the consulting services market, Glückler and Armbrüster (2003) state that trust that is based on previous interactions is especially important in this context because of the high uncertainty concerning the quality of the consulting services. Experience-based trust contributes to developing durable and reciprocal relationships and thus to reducing existing uncertainties.

Different from that, a customer company develops characteristic-based trust towards the consulting firm when that firm displays certain characteristics (Zucker L. , 1986). Those characteristics are thereby of importance that are observable to all market participants and that make these actors assume that the consulting firm is capable of and willing to provide high-quality services. These assumptions can thereby be made even in the absence of own experiences with the consulting firm (Glückler & Armbrüster, 2003). (Potential) customers develop positive expectations regarding the performance of consulting firms and thus develop characteristic-based trust towards firms showing these characteristics.

Taken together, we expect that both experience-based and characteristic-based trust in the dyadic relationship between the recommending medium-sized company and the consulting firm will have a

15 Zucker (1986) proposes a third form of trust production: institution-based trust thereby represents a form of trust production "where trust is tied to formal societal structures" (Zucker, Production of trust: institutional sources of economic structure, 1840-1920, 1986, p. 53). However, since the consulting services market is marked by a lack of formal institutions and structures as well as professional standards (Clark, 1993; Glückler & Armbrüster, 2003), this type of trust production should not be of central importance in the context of this study.

positive effect on the recommendation behavior of medium-sized companies. In the following we identify factors indicating whether the two types of trust exist and to what degree and we develop hypotheses concerning the relationship between these indicators and observable recommendation behavior.

4.2.3 Indicators for experience-based trust

Satisfaction with previous performance

In marketing literature, a positive relationship between satisfaction with previous services and positive expectations regarding the quality of future services is often proclaimed. Satisfaction is thereby described as ex post evaluation of a service which is a function of ex ante expected performance and quality (Kotler, 1991; Oliver R. , 1980). When expectations have been met or even exceeded, a high degree of satisfaction is achieved. Satisfaction, in turn, influences the expectations concerning future service quality and supplier performance. A high degree of satisfaction thus indicates that a high quality is expected in future transactions (Anderson & Sullivan, 1993).

Expectations concerning future behavior are also central elements when conceptualizing trust from an organizational sociology perspective. In this view, we speak of trust when the trustor anticipates that the trustee acts in a good or, rather, socially desired and appropriate way (Hosmer, 1995; Dasgupta, 2000; Gambetta, 2000; Nooteboom, 2000; 1996). Thus, while satisfaction entails expectations concerning the quality of future services and performance, trust itself is more broadly oriented towards capturing expectations concerning the general behavior. As such, satisfaction with previous consulting services can be conceptualized as one, but not the only, indicator of experience-based trust.

In accordance with insights from existing marketing literature (Hausman, 2003; Mangold, Miller, & Brockway, 1999; Meffert & Bruhn, 2009) and research on the consulting services market (Glückler & Armbrüster, 2003) we expect that satisfaction with previous consulting services will have a positive effect on the recommendation behavior. We thus derive the following hypothesis:

> *Hypothesis1a: The intensity with which a company recommends consulting firms to others increases with the company's satisfaction with consulting services employed in the past.*

Duration of cooperation and transaction frequency

Besides satisfaction with consulting services employed in the past, other factors characterizing the exchange relationship should influence a company's recommendation behavior. It can be assumed that positive expectations concerning the future behavior of the consulting firm are developed and strengthened over time and with an increasing number of positive experiences. As a result, the amount of experience-based trust should be higher in long-term relations than in one-time, spot-market like transactions (Powell, 1990; Gounaris & Venetis, 2002; Walgenbach, 2000). The duration of cooperation between consulting firms and medium-sized companies should thus positively influence the companies' tendency to make recommendations. In accordance with these arguments, in their empirical study File, Cermark und Prince (1994) have found that the duration of cooperation with a service provider enhances the probability that a recommendation is made. In addition, trust is developed through repetition and thus depends on the frequency with which business partners interact (Gulati & Sytch, 2008; Gulati, 1995). Accordingly, Burt and Knez (2001) show that both the duration of cooperation and the transaction frequency positively contribute to the development of trust. This finding is based on the assumption that business partners get to know each other well through continuing interactions and that trust thus emerges around norms of equity (Coulter & Coulter, 2002). We thus develop the following two hypotheses:

> *Hypothesis1b: The intensity with which a company recommends consulting firms to others increases with the duration of cooperation with which the company has worked with consulting firms.*
>
> *Hypothesis1c: The intensity with which a company recommends consulting firms to others increases with the transaction frequency with which the company has worked with consulting firms.*

Future demand for consulting services

An additional indicator for whether a company has positive expectations concerning the future performance of a consulting firm, results from the answer to the question whether the company intends to employ consulting services in future. Clearly declaring an intended behavior provides information on the degree of existing trust (Moorman, Deshpandé, & Zaltman, 1993). Although other factors may surely influence the future demand for consulting services – e.g. planned restructuring programs or the economic situation – it can be assumed that companies planning to employ consulting services in future are convinced that consulting firms may function as important triggers of innovation and change agents and may thus have positive expectations concerning the role these firms might play in their companies' future development. As a result, planning to continue employing consulting services may be considered as an indicator of experience-based trust (Morgan & Hunt, 1994). We thus propose the following:

> *Hypothesis1c: The intensity with which a company recommends consulting firms to others increases with the intensity with which the company intends to employ consulting services in future.*

4.2.4 Indicators for characteristic-based trust

Firm size and reputation

Certain characteristics of consulting firms supposedly point to a high competence of these firms. (Potential) customers of consulting firms displaying these characteristics might develop positive expectations concerning the future performance of the service providers. On this basis characteristic-based trust is developed. Kollock (1994) and Uzzi (1997) view characteristic-based trust mainly as a function of firm size and reputation. Large consulting firms tend to have larger financial and personnel resources and are, hence, often perceived as more competent than smaller consulting firms (Glückler & Armbrüster, 2003). In this view, firm size means that the firm has successfully grown or has been able to sustain a large size in the past, which is only explainable through the good quality of the services it has provided. Recommending medium-sized companies and potential consulting customers may assume that, considering the large number of projects large consulting firms must have performed for a large number of customers, bad performance and a lack of competence would have got around.

Another indicator for whether positive expectations are developed based on characteristics of consulting firms is the firms' public reputation (Greenwood, Li, Prakash, & Deephouse, Reputation, diversification, and organizational explanations of performance in professional service firms, 2005;

Rao, Greve, & Davis, 2006). Reputation of consulting firms can be defined as „the perception of a consulting firm’s past performance” (Clark, 1995, p. 74). Reputation represents the publicly disclosed ability of a firm to be able to continuously provide high quality services. In the context of the consulting services market Glückler and Armbrüster (2003) argue that, despite or due to the lack of formal institutions and standards, information in the form of public reputation are central for reducing ex ante uncertainty considering the consulting services' quality. Following this line of argumentation, public reputation may contribute to the development of characteristic-based trust. Especially considering medium-sized companies that in many cases lack the resources to make thorough evaluations of potential service providers, the importance of reputation has been shown for developing trust towards suppliers of knowledge-intensive services (Enke, Greschuchna, & Geigenmüller, 2007).

Both indicators for experience-based trust – firm size and reputation – should have a positive effect on the propensity with which recommendations are made independent from the amount of or even in absence of experience-based trust. Two central mechanisms drive this expectation: First, size and reputation usually represent characteristics that are developed over time and should thus be stable with regard to their consequences. When, for instance, a medium-sized company has made a negative experience with a large firm in one specific project, this may have many different explanations. The specific team of consultants may be (made) responsible for the poor performance or the poor performance may be attributed to the team in the medium-sized company that was in charge of overseeing and supporting the specific project. In both cases the negative experience is not necessarily attributed to the consulting firm in general but potentially only to certain (replaceable) parts of that firm. Resulting from this, despite having made one single negative experience, a medium-sized company may have a positive attitude towards a consulting firm and may have positive expectations concerning that firm’s future performance. The medium-sized company may, hence, still recommend the consulting firm to business partners or friends.

Second, recommending a large or highly reputable consulting firm may represent a “safe strategy”. As described above, the recommending firm to a certain extent vouches for the future performance of the recommended firm meaning that in the case of the consulting firm’s poor performance the recommending company might face sanctions from the other actors in the triad. However, if the recommendation turns out to be a mistake because, for instance, the consulting firm behaves opportunistic in the newly established business relationship, the recommending company may turn to the explanation that the consulting firm has proved the ability to provide high-quality services by pointing to the firm's reputation. Firm size and reputation represent market knowledge that has been assured by a large number of market participants and thus justifies the recommendation.

Taken together, we expect that both indicators of characteristic-based trust – firm size and public reputation – should have a positive effect on the recommendation behavior of medium-sized companies. We thus develop the following hypotheses:

> *Hypothesis2a: The intensity with which a company recommends consulting firms to others increases with the size of consulting firms the recommending company has employed in the past.*
>
> *Hypothesis2b: The intensity with which a company recommends consulting firms to others increases with the public reputation of consulting firms the recommending company has employed in the past.*

4.2.5 Relationship between experience-based and characteristic-based trust

In existing studies explicitly investigating different forms of trust production and potentially the relationship between these forms it is often argued that the relevance of different types of trust production depends on the stage of the relationship between trustee and trustor (Zucker L. , 1986; Glückler & Armbrüster, 2003). A sequential model is thus often described. When a business contact has just been established and the medium-sized company and the consulting firm have not yet worked together in previous projects, the customer company should make recommendation decision based on the characteristics of the consulting firm meaning that characteristic-based trust should be dominant in early phases of a business relationship. After projects have been successfully accomplished and experience-based trust has been developed, it is assumed that publicly observable characteristics of the consulting firm loose importance and recommendation decisions should be made based on own experiences.

Empirical studies support this view. For instance, Enke, Greschuchna and Geigenmüller (2007) show that for medium-sized companies, characteristics of the consulting firm such as public reputation are central for developing and establishing trust towards that firm when initiating and developing a new business contact. In addition, in their qualitative study on the production of trust between market actors in the United states in times of transition (1840 to 1920 in the U.S.) Zucker (1986) finds that when experience-based trust has been shaken - for instance because a large number of new, international actors have entered the U.S. market - trust is produced based on other sources and characteristic-based trust gains importance. When the number of suppliers has strongly increased, customer requirements considering the quality of goods and services also increase. In response to this development, it is observable that service providers aim to differentiate from other actors in the market through developing strong relationships with their customers. As a consequence, experience-based trust gains importance again. Humphrey and Schmitz (1998) come to similar result in their study on cooperation relationships in clusters in developing and transition economies. Marked by an especially high degree of reciprocal dependencies, the emergence and persistence of clusters mainly depend on the existence of trust between cluster members. Based on several case studies, Humphrey and Schmitz (1998) show that members of clusters operating in mature markets in which a growing competition from actors external to the cluster can be observed, increasingly invest in relationships with their suppliers aiming to profit from these differentiation efforts. While reputation and other firm characteristics dominate the production of trust in emerging and growing markets with a limited market volume, existing cooperation relationships and individual experiences gain importance for trust production in competitive markets.

Taken together, experience-based trust and characteristic-based trust are understood as (partly) substitutes (Zucker L. , 1986) which indicates that substitutive relationships should also be observable between indicators of these two types of trust production. These substitutive relationships should also exist with regard to their influence on the recommendation behavior of medium-sized companies. We thus develop the following hypothesis:

> *Hypothesis3: There are substitutive relationships between indicators of the two different types of trust production*

4.3 Approach, data and methods

4.3.1 Data collection

In order to test the expected relationships empirically, we use data from a quantitative survey on the use of consulting services among medium-sized companies in Germany which has been conducted by the Witten Institute for Family Business (Wittener Institut für Familienunternehmen) and the Institute for research on small and medium-sized companies in Bonn (Institut für Mittelstandsforschung Bonn) in 2006. The database Amadeus has been used to draw a random sample of medium-sized companies. Amadeus is based on data which is derived from Creditreform e.V., an institute capturing the largest amount of credit and trade information on companies in Germany and thus providing a satisfactory picture of the medium-sized companies in Germany. All autonomous, non-listed, private firms with their headquarters in Germany, with between ten and less than 500 employees and annual sales of between one and less than 50 million Euros have thereby been selected. Only companies from the primary sector (agriculture, forestry and fishing, mining, and extraction of oil and gas) have been excluded. 11,475 companies fulfilled these criteria. The questionnaire addressing the use of consulting services has been sent to these medium-sized companies by fax. In 10,210 cases a technical confirmation has been received that the fax was transmitted.

In total, 315 companies have responded to the call for participation (rate of return of 3.1%).[16] Of these 315 companies, 137 have stated that they have employed consulting services within the last three years (43.5% of all participants). These 137 companies represent the sample fort the study at hand. According to t-tests, the group of companies which have employed consulting services during the last three years and the group of companies that have not, significantly differ with regard to company size. Larger firm tend to employ consulting services more often than smaller firms. In contrast, no differences can be observed considering the distribution across industries and legal forms according to Pearson's chi squared test. The companies in our sample also significantly differ from companies in the basic population of medium-sized companies. Large firms can be found more often in our sample

[16] The relatively low rate of return can be partly explained by methodological issues (use of fax, incorrect and addresses in database). In addition, the large number of surveys that medium-sized are asked to participate in is often described as a major barrier to achieving high return rates. However, is has to be generally mentioned that such a low return rate is not uncommon (Baruch & Holtom, 2008).

than in the basic population. We discuss this and other restrictions of our study in the final section of this paper. In a dominant part of participating companies (approx. 80%), the questionnaire has been filled out by the director or president of the firm or, respectively, by one of the directors. Applying t-tests and Pearson's chi squared test we did not identify significant difference between answers from directors/presidents/CEOs and other members of the organization, who have filled out the questionnaires in the remaining 20% of cases.

4.3.2 Data analysis

Dependent variable

The aim of this study is to investigate how recommendations emerge in the consulting services market. Our dependent variable is thus derived from the question in the questionnaire in which participants were asked how often they have recommended consulting firms to others. There were three response options in the questionnaire: *never*, *seldom* and *often*. Our dependent variable may thus take these three values each of which describes one type of recommendation behavior. We differentiate between active (*often*) and passive (*seldom*) recommendation behavior and the active denial to recommend consulting firms (*never*). This distinction is based on the assumption that different types of recommendation behavior have different motivations. Companies or their representatives may rather "accidently" make a recommendation when, for instance, in a general discussion with business partners the attention is directed towards exchanging experiences with consulting firms (Mangold, Miller, & Brockway, 1999). Different form that, medium-sized companies may consciously and intentionally share their positive experiences with their business partners (Mangold, Miller, & Brockway, 1999). In this case, we observe as much more active recommendation behavior.

Independent variables

Above we identify four indicators for experience-based trust: satisfaction with consulting services employed in the past, duration of cooperation, interaction frequency, and intensity with which the company intends to employ consulting services in future. In the following we describe how these four indicators have been operationalized:

- To operationalize the satisfaction with consulting services employed in the past, we used the question in which the medium-sized companies were asked to indicate on a 5-point likert scale how satisfied they have been with consulting services employed within the last three years. We thus employ a one dimensional satisfaction measure (Bergkvist & Rossiter, 2007; van Doorn & Verhoef, 2008; File, Cermark, & Prince, 1994) to develop the variable *satisfaction*.
- The *duration of cooperation* was directly inquired on a scale with four values.
- Interaction frequency was operationalized using the *project frequency* indicating the frequency with which questioned companies employ consulting services in clearly defined, temporary projects.
- We used the question concerning the intensity with which the company intends to employ consulting services in future to operationalize *future demand*. The participants thereby had the possibility to choose among five response categories.

The indicators for characteristic-based trust – firm size and reputation – were operationalized as follows:

- To capture size of the consulting firms, the companies were asked if they prefer to employ consulting firms of a certain size while differentiating between five different types of projects (organization and processes, strategy, IT, human resources management, finance). To generate an independent variable we calculate the average preferred consulting firm size (*firm size*).
- The reputation of the consulting firms was operationalized by using the question of how important the reputation (respectively the image/popularity/reputation) of consulting firms is when selecting a consulting firm for cooperation (*firm reputation*).

Since we expect to observe interactions between experience-based and characteristic-based trust, we also calculate interaction terms:

- Whether substitutive or complementary relationships are observable between indicators for the two types of trust is investigated using interaction terms. To do so, we generate product terms between all indicators of the two types of trust. In order to avoid multicollinearity effects and to facilitate interpretation of the main effects we centered all variables before calculating these product terms (Jaccard & Turrisi, 2003).

All independent variables with five or more values are treated as quasi-metric in the following regression models. Category variables with less than five values (*duration of cooperation* and *project frequency*) were recoded as binary variables with one basic category in order to check whether monotone linear relationships are observable between the dependent variable and the independent variables. This is the case for both variables meaning that they can be included into regression models as category variables. It also has to be noted that the independent variables partly apply to different reference objects. Some variables refer to the primarily employed consulting firms, others refer to all consulting firms employed within the last three years, and again others refer to the preferences of the medium-sized company with regard to employing consulting firms. However, it has to be noted that over 60% of participating medium-sized companies state that they employ two consulting firms or less and more than 80% of them work with the selected consulting firms for several years. Taken together, it can be concluded that medium-sized companies do not have a large portfolio of consulting firms they work with. Instead, they often develop strong and long-tem relationships to one or very few consulting firms. As a result, although reference objects of our variables conceptually differ, we would expect that these reference points strongly overlap considering the answers to the questions.

Control variables

In all models we control for characteristics of the participating companies. We thereby include *company size* (using a variable with six size ranges according to the number of employees), industry (binary variables: *manufacturing, trade, services*), and legal form (binary: *incorporated, non-incorporated*). An overview of all variables, scales and values as well as the questions from which these variables were derived can be found in Table 12.

Table 12: Variables, questions, scales and values

variable type	variable	question in questionnaire	scale	values
dependent	*often* *seldom* *never*	"How often have you recommended the consulting firm that you work with most often?"	three binary variables	1/0
independent, experience-based trust	*satisfaction*	„How satisfied have you been with the consulting servces employed durng the last three years?"	count variable (quasi-metric)	1 = not satisfied 2=less satisfied 3=satisfied 4=very satisfied 5=absolutely satisfied
independent, experience-based trust	*duration of cooperation*	„How long have you worked with the consulting firm that is your most important provider of consulting services?"	count variable	1 = <2 years 2 = 2 to 4 years, 3 = 4 to 6 years, 4 = >6 years
independent, experience-based trust	*project frequency*	„How often have you been working iwith consulting firms during the last three years in clearly defined, temporary projects?"	count variable	" 1 = never, 2 = seldom, 3 = often
independent, experience-based trust	*future demand*	„How do you expect your demend for consulting services to develop within the next three years?"	count variable (quasi-metric)	we plan to... 1=strongly reduce, 2=slightly 4=slightly increase, 5=strongly increase ...the demand
independent, characteristic-based trust	*average firm size*	„Consulting firms of which size do you prefereably work with in the folliwing types of projects? Oorganization and processes, strategy, IT, human resources management, finance" response categories: 1 = single consultant, 2 = small (2-5 consultants), 3 = medium (6-25 consultants), 4 = large (>25 consultants), 5 = size does not matter.	metric (mean value calculated)	metric values between 1 and 4 (for calculating the average value we excluded the response caterogy „5 = soizes does not matter")
independent, characteristic-based trust	*importance of reputation*	„How important are the following crietiea when employing a consulting firm for the first time? Reputation / popularity / image."	count variable (quasi-metric)	importance is 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high
control	*company size*	„How many employees have been working for your comüany at the end of 2006 (including the owners and part-time employees)?"	count variable (quasi-metric)	1 = less than 10, 2 = 10 to 49, 3 = 50 to 99, 4 = 100 to 249, 5 = 250 to 499, 6 = 500 and more
control	*industry manufacturing* *industry trade* *industry services*	„In which industry is your company promarily operating?" Antwortkategorien: 1 = manufacturing, 2 = trade, 3 = services	three binary variables	1/0
control	*incorporated*	„What is the legal form of your company?" response categories: sole proprietorship / private partnership, genral partnership (OHG, including GmbH & OHG), limited partnership (KG, including GmbH & Co. KG); limited liability company (GmbH); corporation; others	binary	we aggregated all incorporated and non-incorporated 1/0
interaction term	*satisfaction x reputation*	multiplication of the variables "satisfaction" and "importance of reputation"	quasi-metric	
interaction term	*satisfaction x average firm size*	multiplication of the variables "satisfaction" and "average firm size"	quasi-metric	
interaction term	*duration x reputation*	multiplication of the variables "duration of cooperation" and "importance of reputation"	quasi-metric	
interaction term	*duration x average firm size*	multiplication of the variables "duration of cooperation" and "average firm size"	quasi-metric	
interaction term	*project frequency x reputation*	multiplication of the variables "project frequency" and "importance of reputation"	quasi-metric	
interaction term	*project frequency x average firm*	multiplication of the variables "project frequency" and "average firm size"	quasi-metric	
interaction term	*future demand x reputation*	multiplication of the variables "future demand" and "importance of reputation"	quasi-metric	
interaction term	*future demand x avergae firm size*	multiplication of the variables "future demand" and "average firm size"	quasi-metric	

4.4 Results

4.4.1 Descriptive statistics

Descriptive statistics and correlations for all dependent and independent variables are displayed in Table 13. To be better interpretable, descriptive results are thereby displayed for non-centered variables. Considering our dependent variable we most often observe a passive recommendation behavior (81 cases for *seldom*), followed by an active recommendation behavior (39 cases for *often*) and the active denial to make recommendations (14 cases for *never*). An average medium-sized company in our sample states that it is “satisfied” to “very satisfied” (mean value is 3.28 on a 5-point likert scale) with the consulting services employed within the last three years and none of the companies says to be “not satisfied” (minimum value for that variable is “2”). On average the participating companies work with their most important provider of consulting services for more than four years (mean value is 2.24 on a 5-point likert scale which lies between the two categories “2 to 4 years” and “4 to 6 years”) and they do so “seldom” to “often” (“seldom” has been stated in 81 cases, “often” in 49 cases and “never” in only 4 cases). The future demand for consulting services is expected to remain relatively stable (mean value of 2.89 on a 5-point likert scale which corresponds to the category “remain constant”). The companies in our sample prefer to employ small consulting firms (mean value is 1.71 on a scale with four values which corresponds to the category “2 to 5 consultants”) while the reputation of the consulting firm plays a medium role when selecting a business partner (mean value is 2.97 on a 5-point likert scale which corresponds to the category “medium”).

Table 13: Descriptive statistics

		frequency	mean value	standard deviation	satisfaction	duration of cooperation	project frequency	average size of consulting firm	importance reputation	company size	industry_manufacturing	industry_trade	industry_services	corporation
recommendation behavior	never	14	2.19	0.60	,355**	,307**	,235**	,206*	-.013	.093	-.064	.111	-.035	.043
	seldom	81			.000	.000	.007	.017	.884	.285	.463	.202	.689	.619
	often	39												
satisfaction			3.28	0.61		.095	.151	.094	.072	-.119	-.059	.066	.002	.067
						.278	.085	.281	.409	.170	.496	.450	.985	.444
duration of cooperation			2.24	0.97			-.057	,185*	,201*	.037	-.110	.065	.058	.058
							.513	.032	.020	.671	.205	.454	.501	.502
project frequency	never	4	2.57	0.55				,228**	-.023	-.020	.092	-.065	-.038	.166
	seldom	49						.008	.789	.819	.293	.455	.661	.055
	often	81												
average size of consulting firm			1.71	0.88					.088	,275**	.131	-,221**	.068	.016
									.310	.001	.130	.010	.434	.857
importance of reputation			2.97	1.26						-.120	-.119	.014	.118	-.066
										.162	.168	.874	.171	.441
company size			3.68	1.25							,326**	-,277**	-.085	-,131*
											.000	.000	.134	.020
industry_manufacturing		63										-,511**	-,579**	-,132*
												.000	.000	.019
industry_trade		35											-,405**	-.044
													.000	.432
industry_services		39												,183**
														.001
incorporated		83												

To assess whether collinearity may cause problems in our further analysis we calculated the variance inflation factors and found that none is greater than 1.6 and hence far below the critical value of 10 (Hoang & Rothaermel, 2005). In addition, all variables were centered before calculating interaction terms and conducting regression analyses (Hoang & Rothaermel, 2005). Moreover, correlations between dependent and independent variables indicate that many of the hypothesized relationships might hold true. In contrast, correlations between indicators of the two types of trust production are not significant except for the correlation between *satisfaction* and *project frequency*. As a result, it was not possible to extract factors for experience-based and characteristic-based trust. In the following, the expected relationships are put to test using regression analysis.

4.4.2 Results of the multinomial logistic regression

Direct effects of the two types of trust production

Since our dependent variable has three values, we apply multinomial logistic regression models to test our hypotheses.[17] Odds ratios are provided to specify effect size and direction. McFadden's pseudo R^2 and adjusted count R^2 are shown as indicators for model fitness.[18] Likelihood ratio tests are used to analyze the importance of single variables for explaining the dependent variable and to test the above hypotheses. Table 14 shows the results of miltinomial regressions. In Table 15, the results of the likelihood ratio tests are provided.

In model 1 we included control variables and we only observe a significant industry effect. These results are confirmed in the likelihood ratio tests where only the industry variables can be shown to have a significant influence on recommendation behavior. However, considering the adjusted count R^2 of 0.005%, it can be concluded that in model 1 the number of correctly predicted values is not higher than it would be possible by chance (Hoetker, 2007; Long & Freese, 2006). The control variables thus do not seem to have explanatory value. In models 2 and 3 we stepwise include variables for experience-based and characteristic-based trust. Since effects observable across both models are stable we only report the results as observable in model 3. We thereby see that both *satisfaction* and *duration of cooperation* significantly increase the propensity to recommend consulting firms 'seldom' rather than 'never', and both have an even stronger effect on the propensity to recommend consulting firms 'often' rather than 'never'. The odds ratios (also called relative risk ratios) show that, for instance, with a one-unit increase of *satisfaction* – while holding all other variables constant at their means – the chance to recommend 'often' is 16.29 times higher than the chance to 'never' recommend. In contrast, the *project frequency* does not have an impact on recommending the consulting firm 'seldom' rather

[17] The Hausman test indicates that independence of irrelevant alternatives (IIA) is given and hence multinomial models can be applied. Note that, Long and Freese (2006) do not encourage the use of the Hausman Test (neither do they support the use of the Small-Hsiao test, representing a second commonly used method for testing the IIA) since results depend on, among others, the data structure. But as the authors do not provide alternatives for testing the IIA, we use this test and call attention to its limitations.

[18] The count R^2 is based on a comparison of predicted and observed values and thereby indicates the percentage of values that are predicted correctly (Hoetker, 2007). "Considering that, in a binary model, without knowledge about the independent variables, it is possible to correctly predict at least 50% of the cases by choosing the outcome category with the largest percentage of observed cases, the adjusted count R^2 is often chosen to be reported, representing the proportion of correct guesses beyond the number that would be correctly guessed by choosing the largest marginal" (Clark, 1995, p. 111).

than ‘never’ but significantly enhances the probability of showing an active recommendation behavior (‘often’) rather than to deny to make recommendations (‘never’).[19] An odds ratio of nearly one (exactly: 1.26) shows that the chances to ‘seldom’ and to ‘never’ make a recommendation in case of a one-unit increase of the *project frequency* are practically the same. The anticipated *future demand* has an observable effect on the propensity to ‘seldom’ rather than ‘never’ make a recommendation. Different from that, planning to increase the demand for consulting services does not seem to significantly enhance the chances to ‘often’ rather than ‘never’ recommend a consulting firm.

According to the results of likelihood ratio tests, the first three variables indicating experience-based trust increase model fitness and thus significantly contribute to explaining why some companies recommend consulting firms more often than others. In contrast, the future demand does not significantly contribute to explain these differences. These observations allow for the conclusion that *satisfaction, duration and frequency of cooperation* influence the recommendation behavior towards a more active one – as expected in hypotheses 1a to 1c – while we find only limited support for the expectation as formulated in hypothesis 1d. However, none of the hypotheses concerning the influence of experience-based trust can be rejected.

With regard to the influence of characteristic-based trust – as approached by the two indicators *importance of reputation* when selecting a consulting firm and *average firm size* of consulting firms the company preferably works with – we do not observe any significant effects. Most odds ratios are close to one meaning that when increasing an indicator by one unit the chances to recommend ‘often’ rather than ‘never’ or ‘seldom’ rather than ‘never’ remain practically the same. We thus do not find support for hypotheses 2a and 2b.[20]

19 This result supports the choice of multinomial regression models over ordinal regression models. Generally, the three values – often, seldom, never – can be ordered meaning that ordinal regression models could also be used (ologit or oprobit). However, the differentiated influence of project frequency would not have been visible in these models as has been shown in our preliminary assessment for selecting the method of statistical analysis.

20 Characteristic-based trust can also be produced based on observable similarities between business partners (Zucker, Production of trust: institutional sources of economic structure, 1840-1920, 1986). We argue that in the context of this study those characteristics should be of more importance that indicate competence and expertise rather than similarity. However, in order to account for results from other studies we investigate whether the fact that consulting firms provide services specifically for small and medium sized companies or whether geographical proximity between consulting firm and medium-sized company – both have been shown to be influential for trust production in the study by Enke et al. (2007) – have an effect on recommendation

Table 14: Results of multinomial regression analysis

			M1	M2	M3	M4	M5	M6	M7
			Odds Ratios	Odds Ratios	Odds Ratios	Odds Ratios	Odds Ratios	Odds Ratios	Odds Ratios
seldom	experience-based trust	satisfaction		9.520** (0.018)	5.448* (0.093)	34.584* (0.059)	14.451** (0.037)	5.483 (0.125)	5.744 (0.142)
		duration of cooperation		3.388** (0.029)	3.085* (0.054)	6.523** (0.018)	4.653** (0.025)	6.362** (0.020)	5.425* (0.052)
		project frequency		1.097 (0.886)	1.410 (0.593)	1.073 (0.934)	1.062 (0.935)	0.878 (0.881)	0.747 (0.700)
		future demand		2.364* (0.084)	2.538* (0.064)	2.613* (0.079)	3.193** (0.034)	3.463** (0.022)	2.711* (0.071)
	characteristic-based trust	average firm size			0.755 (0.567)	0.685 (0.525)	1.007 (0.990)	0.823 (0.721)	0.268 (0.140)
		importance of reputation			0.977 (0.953)	2.550 (0.120)	1.102 (0.822)	0.416 (0.173)	1.199 (0.671)
	interaction terms	satisfaciton x importance of reputation				16.219** (0.029)			
		future demand x average firm size					8.267** (0.013)		
		duration of coopoeration x importance of reputation						0.303** (0.045)	
		duration x average firm size							0.169** (0.046)
	controls	company size	1.447 (0.214)	1.204 (0.609)	1.086 (0.834)	0.995 (0.990)	1.497 (0.418)	1.242 (0.607)	1.289 (0.536)
		incorporated	1.534 (0.474)	0.671 (0.637)	0.934 (0.937)	1.519 (0.669)	1.169 (0.866)	1.524 (0.668)	1.771 (0.552)
		industry manufaturing	0.207** (0.024)	0.072** (0.014)	0.055** (0.019)	0.112 (0.102)	0.024** (0.016)	0.036** (0.017)	0.026** (0.020)
		constant	2.736 (0.360)	92.030** (0.011)	130.026** (0.016)	311.609** (0.014)	149.262** (0.038)	163.723** (0.012)	196.551** (0.013)
often	experience-based trust	satisfaction		25.782*** (0.001)	16.291*** (0.009)	103.491** (0.015)	45.155*** (0.004)	15.860** (0.018)	17.323** (0.021)
		duration of cooperation		8.149*** (0.001)	7.457*** (0.002)	16.245*** (0.001)	10.798*** (0.001)	17.159*** (0.001)	11.595*** (0.007)
		project frequency		7.078** (0.021)	7.816** (0.017)	5.446* (0.098)	5.454* (0.070)	5.606 (0.102)	4.228 (0.125)
		future demand		1.955 (0.222)	1.940 (0.234)	2.039 (0.238)	2.362 (0.147)	2.663 (0.101)	1.889 (0.287)
	characteristic-based trust	average firm size			0.949 (0.924)	0.867 (0.824)	1.410 (0.571)	1.170 (0.791)	0.330 (0.228)
		importance of reputation			1.390 (0.466)	3.588* (0.052)	1.599 (0.335)	0.847 (0.809)	1.495 (0.407)
	interaction terms	satisfaciton x importance of reputation				19.824** (0.025)			
		future demand x average firm size					11.595*** (0.007)		
		duration of coopoeration x importance of reputation						0.146*** (0.005)	
		duration x average firm size							0.382 (0.309)
	controls	company size	1.622 (0.128)	1.632 (0.239)	1.410 (0.442)	1.297 (0.596)	1.903 (0.234)	1.646 (0.297)	1.641 (0.287)
		incorporated	1.462 (0.553)	0.475 (0.420)	0.664 (0.663)	1.091 (0.934)	0.826 (0.847)	1.232 (0.843)	1.049 (0.962)
		industry manufaturing	0.263* (0.071)	0.066** (0.019)	0.058** (0.030)	0.121 (0.134)	0.027** (0.024)	0.040** (0.028)	0.026** (0.026)
		constant	0.776 (0.833)	10.966 (0.228)	16.743 (0.203)	39.469 (0.145)	19.699 (0.247)	14.633 (0.237)	29.400 (0.146)

*** p<0.01, ** p<0.05, * p<0.1; significances in brackets

behavior. For none of these variables we see a significant effect while all other effects remain the same. We thus do not include these variables in our final models.

Table 15: Results of likelihood ratio tests

		M1	M2	M3	M4	M5	M6	M7
likelihood ratio tests for independent variables (df = 2)	satisfaction		15.934***	12.373***	14.999***	15.990***	10.449***	11.063***
			0.000	0.002	0.000	0.000	0.005	0.004
	duration of cooperation		18.791***	16.406***	21.265***	16.991***	21.341***	14.177***
			0.000	0.000	0.000	0.000	0.000	0.001
	project frequency		14.015***	10.640***	9.274***	8.844**	11.218***	9.960***
			0.001	0.005	0.009	0.012	0.004	0.007
	future demand		3.459	4.269	3.768	5.654*	6.264**	4.580
			0.177	0.118	0.152	0.059	0.044	0.101
	average firm size			0.852	0.977	1.119	1.406	3.440
				0.653	0.613	0.572	0.495	0.179
	importance of reputation			1.606	4.564	1.913	6.275**	0.865
				0.448	0.102	0.384	0.043	0.649
	satisfaciton x importance of reputation				10.653***			
					0.005			
	future demand x average firm size					8.617**		
						0.013		
	duration of coopoeration x importance of reputation						11.438***	
							0.003	
	duration x average firm size							9.712***
								0.008
	company size	2.401	2.114	1.202	1.129	1.769	1.587	1.411
		0.301	0.347	0.548	0.569	0.413	0.452	0.494
	incorporated	0.513	0.848	0.522	0.602	0.503	0.332	1.291
		0.774	0.654	0.770	0.740	0.777	0.847	0.524
	industry manufacturing	5.764*	8.751**	8.912**	3.686	11.134***	9.622***	10.479***
		0.086	0.013	0.012	0.158	0.004	0.008	0.005
	McFadden's pseudo R2	0.0322	0.2664	0.2706	0.3191	0.3098	0.3227	0.3148
	Adjusted Count R2	0.005	0.240	0.306	0.367	0.327	0.449	0.388

Both McFadden’s pseudo R^2 and adjusted count R^2 increase by 30 to 40 percent points when including the independent variables while, according to likelihood ratio tests, only the indicators for experience-based trust contribute to enhancing model fitness. It can thus be concluded that differences in recommendation behavior of medium-sized companies can be explained by differences in the experience-based trust these companies have towards consulting firms.

Please note that in order to develop a deeper understanding of the effect in model 3 we also conducted several post-estimation analyses. To refine the above analysis, factor changes in odds of one alternative relative to a second alternative for a unit increase in the respective independent variable were calculated while all possible combinations were considered (Long & Freese, 2006). Referring to current literature on the use of logistic regression models (Hoetker, 2007) we also calculated marginal effects on the probabilities of each outcome representing instantaneous rates of change or the slope of the probability curve and thus indicating the relationship between an explanatory variable and the dependent variable (Wiersema & Bowen, 2009). In addition, following the critical argumentation of

Long and Freese (2006) on the use of marginal effects in logistic regression models we also calculate effects that discrete changes of the independent variables have on the dependent variable. Finally, we computed the probabilities of each outcome for a given value of the dependent variable, representing measures which might provide a more intuitive understanding of underlying relationships and effects. In all these post-estimation analysis we confirm the observations described above.

Interaction effects

In order to test hypothesis 3 in which we expected that substitutive relationships should be observable between the indicators of the different types of trust production, in models 4 to 7 we test for interaction effects between indicators for experience-based trust and indicators for characteristic-based trust.[21] To make sure that the main effects in these models remain interpretable, only one interaction effect per model is included (Jaccard & Turrisi, 2003). When interpreting the main effects in these models it has to be considered that their meaning changes when including interaction terms. While in the models with no interaction terms the effects of single variables could be interpreted independently of the other variables, the main effect of one of the interacting variables now depends on the value of the other variable which has been used to calculate the interaction term. Before calculating interaction terms we thereby centered all independent variables. As a result, the main effects describe the influence of the independent variable on the dependent variable in the case that the other interacting variable takes its mean value (Jaccard & Turrisi, 2003).

As can be seen in models 4 and 5 (Table 14 and Table 15), we observe positive and significant effects for the interaction terms between *satisfaction* and *importance of reputation* as well as the interaction terms between *future demand* and *average firm size*. In both cases also the respective main effects of indicators for experience-based trust are significant. These observations indicate that the effect sizes of *satisfaction* or of *future demand* significantly increase with a growing importance of the consulting *firm's reputation* or a growing *average firm size,* respectively. When medium-sized companies preferably work with consulting firms who enjoy a high reputation and when they were satisfied with the services they employed in the past, they are more likely to recommend consulting firms than

[21] We have calculated and tested interaction effects for all possible combinations of indicators for experience-based trust and characteristic based trust. However, for reasons of clarity we only show those interaction effects in the models for which we observed significant effects.

medium-sized companies for who none of the variables or only one of the two variables takes a high value. This holds for medium-sized companies preferably working with larger firms and at the same time planning to increase their future demand for consulting services, respectively. Besides, it is also worth mentioning that we observe positive effects for most of the other interactions between indicators of the two types of trust production which are not displayed here because of a lack of significance. We would thus conclude that, for most possible combinations of indicators of experience-based and characteristic-based trust, we rather observe a complementary than a substitutive relationship: the two types of trust production seem to have a mutually reinforcing effect.

The interaction between duration of cooperation and both indicators for characteristic-based trust seem to represent relevant exceptions to that rule (see models 6 and 7).[22] As indicated by odds ratios of below one, the variables seem to reduce each other's effects. When working in combination, the *duration of cooperation* and the *average firm size* as well as *duration of cooperation* and *importance of reputation* reduce the propensity of medium-sized firms to make recommendations. In medium-sized firms that have worked with consulting firms for a longer time period, typical trust-inducing characteristics of the consulting firm such as size and reputation do not seem to contribute to enhancing existing trust. Instead, these medium-sized companies seem to have substituted characteristic-based trust through developing long-term relationships with consulting firms. Taken together, the observed interaction effects indicate that both complementary and substitutive relationships seem to exist between indicators for experience-based and characteristic-based trust.

4.5 Discussion

4.5.1 Summary

In this study we approached the question when and under which conditions medium-sized companies recommend consulting firms. Based on arguments derived from the social embeddedness literature we have expected that recommendation behavior will depend on characteristics of the relationship between medium-sized company and consulting firm (satisfaction, duration, frequency), on the future

[22] Another exception to the rule is the interaction between project frequency and average firm size. However, in this case the effect is not significant.

demand for consulting services and on characteristics of the consulting firm which indicate competence and professionalism (size, reputation). Some of these expectations were confirmed in our empirical analysis of the recommendation behavior of 137 medium-sized companies. We have shown that the recommendation behavior of medium-sized companies is mainly driven by the degree og experience-based trust towards consulting firms while no significant influence of characteristics of the consulting firms were observable. Based in these insights we arrive at the following conclusion: *the recommendation behavior of medium-sized companies is driven by experience-based trust; size and reputation alone are not sufficient to initiate recommendations from medium-sized companies.*

Confirming the importance of experience-based trust for developing business contacts is thereby in line with existing embeddedness literature in which, for instance, DiMaggio and Louch (1998) describe satisfied customers as “a gateway to new clients”. Satisfied customers contribute to the development of a recommendation network, which can function as a relevant market entry barrier for new consulting firms potentially entering the consulting services market. Our results also support the view of proponents of embeddedness literature who argue that trust is developed through repetition and over time (Gulati & Sytch, 2008; Gulati, 1995; Powell, 1990). At the same time, we do not observe any direct effects of characteristic-based trust on recommendation behavior. Neither size nor reputation of consulting firms seem to have significant effects on the recommendation behavior of medium-sized companies. In contrast to our expectations, indicators of characteristic-based trust to not trigger a more active recommendation behavior.

Empirically, it is thereby of special interest that we observe that with an increase of the independent variables, the propensity to show an active recommendation behavior increases more strongly that the propensity to display a passive recommendation behavior. Recommendations are thus not only initiated by experience-based trust, but with an increasing degree of existing experience-based trust, the intensity increases with which recommendations are made. In addition, these observations allow for the conclusion that making recommendations actively or passively represent different types of recommendation behavior, partly initiated by different indicators. Only investigating if recommendations are made, as it is done in the few empirical studies addressing this question, thus seems to be an inadequate approach towards understanding the basis on which recommendations evolve. Differentiating between various types of recommendation behavior allows for developing a deeper understanding of the conditions under which recommendations are made and for the processes underlying recommendation decisions.

When looking at potential interactions between indicators of the two types of trust we observe some positive and significant effects. These observations propose that there often is a complementary relationship between indicators of experience-based trust and indicators of characteristic-based trust. For instance, medium-sized companies recommend consulting firms when they are satisfied with the consulting services they have employed in the past and also plan to employ consulting services in the future. They are thereby even more likely to recommend consulting firms when these firms are large and enjoy a high reputation. Taken in isolation, characteristic-based trust does not seem to have an effect on recommendation behavior but characteristic-based trust contributes to strengthening the effect of indicators of experience-based trust.

One major exception to that rule is the interaction between indicators for characteristic-based trust and the duration of cooperation between medium-sized companies and consulting firms. In this case, the indicators belonging to different types of trust production seem to weaken each others' effectiveness indicating that there exist substitutive relationships between these indicators. Medium-sized companies who have established long-term relationships with consulting firms, rather decide not to recommend those firms when they are large and/or enjoy a high reputation. One very basic explanation for why companies might decide not to recommend those consulting firms with which they have cooperated for a long time is that they might fear that recommended consulting firms transfer the knowledge (concerning, for instance, how processes are carried out or which concepts are adopted) they have developed during the long time of cooperation to other clients. As a result of this spread of company-specific management knowledge, medium-sized companies might fear to lose competitive advantages and thus decide not to recommend consulting firms for this reason. Why this mechanism should especially take effect with regard to large and highly reputable consulting firms cannot be conclusively answered in the present study. However, one could think of a second mechanism that is relevant in this context. It can be assumed that for large consulting firms with a high reputation it should be generally easier to get access to new customers and that they are already known by a large amount of potential customers. As a result, existing customers might not see the need to recommend these firms. In combination, these two mechanisms might contribute to explain why there seem to exist substitutive relationships between indicators of characteristic-based trust and the duration of cooperation between medium-sized companies and consulting firms.

Taken together, when deciding whether to recommend consulting firms or not, medium-sized companies do not seem to be driven by the size and the reputation of consulting firms but their recommendation decisions are rather based on factors characterizing their relationship to consulting firms. Recommendations are thus initiated by the following indicators: First, recommendations are positively influenced by the satisfaction with consulting services employed in the past. Second, the propensity to make recommendations increases with duration of cooperation and frequency of interactions. Third, when companies plan to continue working with consulting firms they tend to recommend them more often. Fourth, size and reputation of consulting firms as indicators for the existence of characteristic-based trust partly contribute to intensifying the effectiveness of experience-based trust indicators, but they do not seem to play a role when working in isolation. Trust which is based on certain characteristics of the consulting form indicating, among other, competence and professionalism, does not seem to contribute to enhancing recommendations which, in turn, potentially contribute to the development of new business contacts – namely between recommended consulting firms and companies receiving the recommendations. This does, however, not necessarily mean that characteristic-based trust is irrelevant for the development of business contacts in the consulting services market. As Enke, Greschuchna and Geigenmüller (2007) have shown, certain characteristics of the consulting firm do play a role for trust production when establishing a new business relationship. However, the decision that is considered in the study of Enke and colleagues (2007) is different from that one considered in the study at hand: While we investigate on which basis recommendations are made, Enke (2007) and colleagues have rather investigated the decision whether to establish and continue relationships to consulting firms. In our study we have shown that when such a relationship is established, characteristics of consulting firms only have an effect on recommendation decisions when working in combination with indicators for experience-based trust. Then, the two types of trust production might complement and strengthen the company’s recommendation behavior.

4.5.2 Contributions to consulting services market research

Which implications do these insights provide for the consulting services market and the providers of knowledge-intensive services? First, it can be concluded that firm size and reputation do not play a role in the competition for recommendations and positive word-of-mouth. This does not mean that firm size and reputation are of no interest for winning contracts and acquiring new customers since in the absence of recommendations these characteristics of consulting firms may play a decisive role. However, since they are of minor interest for developing recommendations, small and medium-sized consulting firms do not have a competitive disadvantage compared to their larger counterparts in this regard.

A second conclusion from this study relates to market entry. It is often argued that there exist no formal market entry barriers in the consulting services market. Due to a lack of professional standards and formal institutions, practically everyone can set up a consulting services business (Clark, 1993; Glückler & Armbrüster, 2003). Partly resulting from this, the consulting services market is characterized by a large variety of small firms. However, when employing providers whose performance can barely be evaluated ex ante, as it is the case for providers of consulting and other professional services, customers prefer to work with providers they already know, either directly or through recommendations made by their partners (Wong & Boh, 2010; Uzzi, 1996; Heider, 1977; Andersson-Cederholm & Gyimòthy, 2010). From the perspective of customers of consulting services the preferred business partners are not new but established market participants while consulting firms get access to new customers through recommendations. Recommendations thus do not only represent a growth mechanism in the consulting services context, they also represent a major mechanism when it comes to facilitating or blocking market entry. Even when market entry might be easy in the absence of formal market entry barriers, long-term survival in this market seems to be based of the consulting firms' ability to acquire first customers and to satisfy and to retain these customers in a way that they recommend the consulting firms to their friends or business partners and thus potentially initiate new business contacts. The recommendation mechanism can thus be considered as an informal market entry barrier.

Finally, our insights point to existing limits of impression management efforts of consulting firms, which should exist in the context if medium-sized customer companies. While large companies seem to preferably work with and recommend large and reputable consulting firms in order to fulfill existing expectations concerning beliefs about rational and appropriate behavior and “good” management and to legitimize the concepts they have implemented (Ernst & Kieser, 2002; Glückler & Armbrüster, 2003; Abrahamson, 1996), size and reputation seem to play a minor role in the context of medium-sized customer companies. Instead, trust is rather established based on experiences that medium-sized companies have made in past consulting projects. In other words: What counts is the performance and not the characteristics of consulting firms. Our results suggest that the strategy of consulting firms to acquire new customers through investing in reputation building and impression management activities does not seem to be very promising in the context at hand.

4.5.3 Contributions to social embeddedness research

With this study we contribute essentially to embeddedness research by responding to the call for developing a deeper understanding of go-betweens, as it is demanded by, for instance, Uzzi (1996): “A greater understanding of go-betweens, their ability to form, permeate, and stretch the boundaries of social systems, and the conditions under which they can transfer expectations and opportunities of existing embedded ties to new market relationships seems critical for our knowledge of how embeddedness operates” (p. 694). The results of our study indicate that the chances to transfer knowledge and expectation structures to business partners through making recommendations is higher, when recommending companies have accumulated various positive experiences. This means that medium-sized companies display a cautious recommendation behavior and they do not seem to fulfill the role of go-betweens without thinking about potential consequences.

With this study we also refine existing research on sequential models considering the importance of different types of trust production. Existing models point to the dominance of certain types of trust production depending on the status of the respective relationship (Humphrey & Schmitz, 1998), thus indicating that different types of trust production are – at least partly – substitutes (Zucker L. , 1986). Our results do not contradict these arguments. At the same time, we show that when considering established business contacts, different types of trust production may display substitutive and complementary relationships: experience-based trust and characteristic-based trust may both enhance and reduce each others' effectiveness. From an embeddedness perspective, considering different types of trust production in different stages of a relationship thus constitutes a promising area for future research.

4.5.4 Limitations and outlook

Despite refining our insights on the emergence of recommendations in the context of medium-sized client companies in the consulting services market and the contributions to existing research we are thus able to make, our study has some limitations. First, to test the expected relationships we use data from a quantitative survey in which only one company representative was questioned. As a result, a key informant bias might be present (Nicolai & Kieser, 2002). However, considering the small size of companies participating in this study it can be assumed that the CEO, director or president of the company who has filled out the questionnaire should be directly responsible for employing consulting service providers indicating that he is able to make generalized statements concerning the use of consulting services while no other company representative can do so equally well.

A second limitation is that all variables were derived from the same data source and have been captured using only one method which means that the Common Method Bias might occur (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Standard procedures were applied to avoid or at least minimize the sources of potential bias (e.g. use of different scales, the sequence of questions, control questions, consistency checks, assurance not to disclose data). In addition, by conducting a Harman One-Factors analysis we checked whether observable variance can be to a large extent traced back to one factor (Chang, van Witteloostuijn, & Eden, 2010). This is not the case since we observe a low Cronbach's alpha of 0.22. In this context, it also has to be noted that according to recent meta analysis the use of only one method for capturing data does not necessarily indicate that systematic error variances are observable or that these are lower when data is gathered using different methods (Spector, 2006)

Another limitation of this study that should be discussed is the limited degree to which our results are representative and can be generalized. As described above in the methods and approach section, the companies participating in the survey are significantly larger than companies in the overall population of small and medium-sized companies. The conclusions derived on the basis of this data thus rather hold for larger medium-sized companies and it could be tested in further empirical work whether they also apply to very small companies. However, approaching this question might be problematic since very small companies tend not to employ consulting service providers or they do so only rarely. They are thus less often able to gain experiences with consulting firms which could represent the basis for recommending consulting firms to their business partners. In order to overcome this potential limitation and to be able to study the recommendation behavior of very small companies, a different type of knowledge intensive service providers (e.g. accounting services) could be identified which are more often employed and thus potentially more often recommended by very small companies.

In addition, it hast to be noted that although it is generally acknowledged that through making recommendations go-betweens contribute to develop new network relationships between business partners, in this study we were not able to investigate whether the recommendations have actually lead to the development of new business contacts. To approach this question, a research setting would have been necessary in which all three types of actors are questioned: the recommending company, the recommended consulting firm and the company receiving the recommendation. Investigating processes and antecedents of different types of decisions of all actors in the triad surely represents a promising area for future research.

Future research could also address questions considering the content of recommendations (File, Cermark, & Prince, 1994). For instance, it could be asked, to what extent the content of a recommendation influences whether a new business contact is established on the basis of that recommendation. Our study allows us to differentiate between indicators for the relationship quality and characteristics of the consulting firm but we were not able to capture the content of recommendations in the research design applied in this study. In order to deepen our understanding of go-betweens and their role in the development of new business contacts, a research design should be developed in future research that also allows for capturing and investigating the content of recommendations.

5 Discussion

5.1.1 Summary

The starting point for this dissertation was that within the last decades we have experienced an expansion of rational myths considering both their overall number and the variety of areas of application (Sahlin-Andersson & Engwall, 2002; Meyer & Rowan, 1977). Above I have argued that analyzing how rational myths are developed requires understanding how new management ideas become part of the accepted stock of management knowledge. Understanding how knowledge is produced is thereby described as a major goal for any research community (Tsai & Wu, 2010, p. 441). Taking a social constructivist perspective on knowledge production, I have conceptualized the creation and spread of management ideas as a process of theorization. I have thereby identified four major research gaps and I aimed to contribute to closing these research gaps with this dissertation: First, existing literature mainly focuses of the outcomes of theorization processes and not on understanding the processes themselves. Second, the role of certain types of theorizers and especially the consequences of the social embedment of these actors for their theorizing work have received little attention in existing research. Third, theorization literature has emphasized cultural bases for the creation and spread of knowledge but there is a lack of linking this stream of research to work that focuses on structural mechanisms of diffusion. Fourth, especially empirical work is limited to investigating the development and spread of single management ideas and how they are connected to existing norms and values, thereby neglecting potential connections to co-existing management ideas. Taken together, many questions considering the process of theorization, the role of theorizers and their drivers, the connection between cultural and structural mechanisms and the role that the existing knowledge plays in producing and spreading new knowledge have remained unanswered. With the three papers which are part of this dissertation I contribute to answering these questions. I thereby conceptualize the processes through which knowledge is produced and spread as theorization and in all three papers I contribute to refining the understanding of the process of theorization by indentifying its antecedents, the rules it follows and the roles of different types of social actors involved in theorization processes. In the next paragraphs I provide a short summary of the major findings of the three papers.

As a reaction to frequent calls for re-emphasizing the conceptual roots of institutional theory in work from the sociology of knowledge (Meyer R. , 2008; Phillips & Malhotra, 2008), in the first paper I have developed a theoretical model in which theorization is conceptualized as social action: Through processes of theorization, legitimate social actors contribute to creating intersubjectively agreed upon, typified knowledge objects which may gain the status of rational myths when becoming part of the social stock of management knowledge. A central aspect of these processes is to connect knowledge objects to norms and values prevailing in the social context. Considering that co-existing knowledge objects constitute the social stock of knowledge in the respective context, these objects should represent relevant reference points for theorization. As a result, theorizers connect co-existing knowledge objects in texts. I test my theoretical model empirically by investigating the co-occurrences of 53 knowledge objects in academic and business press discourse and I thereby demonstrate that combining co-existing knowledge objects in texts constitutes an important and so far understudied aspect of theorization which both enables and delimits the creation of management knowledge while following certain rules. When theorizers combine management knowledge objects in texts, these combinations are driven by three major mechanisms: leverage, differentiation and embedment. Leverage indicates that upcoming knowledge objects are connected to more established knowledge objects from whose legitimacy they can profit when being jointly discussed. The mechanism of differentiation is based on the idea that knowledge objects compete for the attention of theorizers and adopters and thus have to be differentiated from knowledge objects which are placed on the market for management knowledge at the same point in time. Embedment refers to the sources of knowledge objects: knowledge objects stemming from the same stream of research or addressing the same organizational area of application are embedded in the respective nodal discourse. These insights thus point to promising strategies for how to connect new knowledge objects to the existing stock of management knowledge in order to enhance the new knowledge objects' acceptance and spread.

In the second paper I investigate under which circumstances organizations engage in theorization activities through talking about organizational practices within their self-representations. Based on arguments mainly derived from institutional theory, I develop a model of "symbolic adoption" which indicates that the engagement in theorizing work will be driven by three types of antecedents: power constellations with respect to ownership structures, membership in diverging social contexts, and firm visibility. Empirically, I find that the involvement of certain ownership groups seems to prevent organizational decision-makers from symbolically adopting organizational practices. For instance, publicly-owned firms engage less strongly in processes of theorization than private firms from which it might be more strongly expected to conform to beliefs about rational and progressive management. Moreover, firms spanning social contexts display a more active symbolic adoption behavior. Being exposed to expectations and having access to stocks of knowledge which may to some extent differ across, for instance, countries and regions, organizations seem to engage more intensively in processes of theorization. Additionally, I find that firm visibility has a double-edged effect on symbolic adoption and both enables and delimits an organization's symbolic adoption behavior. In this view, public visibility can be regarded as an indicator for social legitimacy of an organization and as an indicator for public scrutiny. Only when social actors achieve a certain degree of social legitimacy, they are able to influence the knowledge base through processes of theorization, but with growing public scrutiny, the increasing risk that potentially contradictory or inappropriate statements are detected by their observers reduces the organizational engagement in processes of theorization. These insights indicate that organizations might consider an engagement in processes of theorization as a risky undertaking. Especially when being in the public eye organizations might face the risk of saying something "wrong" or inappropriate which is then sanctioned by their audiences. As a result, organizations seem to choose to engage in theorizing work in a way and to an extent which corresponds with the expectations of their social context. It can thereby surely be argued that academics, journalists, and other types of theorizers might also lose credibility and reputation when promoting ideas which turn out to be untenable and that functioning as theorizers is thus generally not without risk. In practice, this risk can be partly reduced through introducing control systems: In the academic context this might be researchers serving as reviewers before research results are published in academic journals, in the business press context it might be editors and publishers and, in the organizational context, it might be public relations and communication experts who are responsible for identifying whether and to what extent engaging in theorization is a feasible action. Taken together, the social context seems to both enable and delimit theorization efforts of social actors.

In the third paper I investigate the recommendation behavior of social actors embedded in social networks who are conceptualized as go-betweens (Uzzi, 1996). Through making recommendations, go-betweens do not only contribute to the transfer of information, they also enhance the development of "shared norms of behavior […] that lead members [of the network] to act in accordance with each other's expectations and to expect the same from other members" (Greve, Baum, Mitsuhashi, & Rowley, 2010, p. 306). In other words, go-betweens contribute to the development of agreement and intersubjective meaning among social actors in a social context – in this case, the social network – which is the basis for knowledge production. As such, go-betweens serve as theorizers – although the outcome of their "direct" theorization may be rather local and potentially limited to the two other actors involved. However, through recommending consulting firms, go-betweens also open up diffusion channels for consulting firms, who are often described as a central type of social actors influencing the spread of ideas (Czarniawska & Joerges, 1996). In the study at hand, recommendations thus function as theorizing acts through contributing to the development of intersubjective meaning, and through enabling consulting firms to do their theorizing work. In my empirical study I thereby observe a rather cautious recommendation behavior meaning that recommendations are only made when shared norms of behavior exist between the go-between and the recommended consulting firms as indicated by the quality, duration, frequency and future intensity of cooperation between these two social actors. This observed caution with regard to organizational engagement in processes of theorization is in accordance with the above proposed idea that functioning as theorizers might be risky, potentially entailing negative consequences. In the context at hand, when a recommendation does not lead to the expected and agreed end, this may have negative consequences for the recommending actor. To conclude, in this paper I show on which cognitive basis organizations – or organizational members – decide whether or not to transfer information in the form of recommendations to network partners.

Taken together, I observe that the concept of embedment is central in all three papers thereby both enabling and delimiting processes of theorization: I conceptualize knowledge objects as embedded in the existing stock of management knowledge in the first paper and show that embedding new knowledge objects is an important element of theorization while following certain rules. Serving as docking points for legitimizing, differentiating or connecting/embedding new knowledge objects, co-existing knowledge objects may by this means, on the one hand, facilitate the production of new management knowledge. On the other hand, since the existing stock of knowledge "delineates the boundaries and the 'horizon' within which people can meaningfully act – and beyond which it is impossible to see or to understand" (Meyer R. , 2008, p. 521), the need to connect new knowledge objects to this knowledge base also delimits possibilities of knowledge creation. In the second paper the concept of embedment applies to social actors. My results thereby point to how the fact that actors are socially embedded influences their theorizing work. A more "local" and specific concept of embedment is utilized in the third paper where social actors' embeddedness in social networks is considered. Here I also show that the intensity of embeddedness influences the decision whether knowledge is transferred to network partners.

5.1.2 Contributions

With the above summarized insights I contribute to existing research in several ways:

First, I develop a theoretical framework which extends and details existing conceptual models of theorization in which the phenomenological roots were not explicitly discussed. However, only when taking the social constructivist origins seriously, I argue, processes of theorization, their dynamics and patterns as well as the roles of theorizers can be understood. The lack of such a thorough and extensive elaboration on the theoretical groundings might to some extent explain why existing research has so far mainly focused on investigating the outcomes of theorization processes rather than the processes of theorization themselves. With this dissertation I enlarge and detail existing insights concerning processes of theorization, both conceptually by developing a theoretically grounded model of these processes and empirically by testing and to a large extent confirming what rules and patterns should be observable.

Second, conceptualizing theorization as social action, I also explicitly account for the fact that theorizers are both dependent on an existing stock of knowledge when producing texts while by this means also contributing to changing this very knowledge base. With this conceptual framework I thus also provide the basis for addressing the question how the social embedment of theorizers affects the way they promote their ideas or which ideas they choose to promote. Contributing to answering this question is thereby not only enabled conceptually, I also provide some answers based on the empirical studies conducted in this dissertation. I show that theorizers are not only enabled but also delimited in their theorizing work through their social embedment while both the characteristics and the intensity of the embedment seem to be relevant. Due to being embedded in highly institutionalized and complex social contexts (Meyer & Rowan, 1977), organizations have thereby displayed a rather cautious theorization behavior which is in accordance with the demands and expectations they face and depends on the anticipated consequences they might face when engaging in theorization efforts. Taken together, the results contribute to developing a deeper understanding of how the social embedment of actors affects them in their role as theorizers.

Third, by applying a social constructivist conceptualization to a setting in which knowledge is transferred through network relations in the third paper, with this dissertation I contribute to bridging existing division between a structural and a cultural view on the production and spread of management knowledge (Strang & Soule, 1998). The insights allow for the conclusion that in order to understand how structural mechanisms work, the underlying cognitive processes have to be understood.

Fourth, I argue and show empirically that a central aspect of theorization is to connect upcoming knowledge objects to other knowledge objects which are developed, spread and discussed at the same time or which are part of the social stock of management knowledge. Previous work has focused on how theorizers connect single new management knowledge objects to characteristics of potential adopters (Strang & Meyer, 1993; Kieser A. , 1997) or to dominant norms, logics and values within organizational fields (Etzion & Ferraro, 2010; Greenwood, Suddaby, & Hinings, 2002; Fiss & Zajac, 2006). In this dissertation I have argued that the sum of co-existing knowledge objects constitutes a major part of the social stock of management knowledge. When aiming to change or modify the social stock of knowledge within a social context, theorizers are thus dependent on embedding the focal knowledge object they promote into the ecology of co-existing knowledge objects. With these insights I enlarge existing research by showing that in their attempt to formulate compelling “patterned relationships such as chains of cause and effect" (Strang & Meyer, 1993), theorizers do not seem to be able to ignore these other – potentially conflicting, complementary, competing – co-existing ideas.

5.1.3 Conclusion

With this dissertation I aim to develop a deeper understanding of the processes of theorization. Putting it differently, I am interested in analyzing decisions of social actors whether and how to spread information and management knowledge. In the first paper I investigate the decision of producers of academic and business press discourse with regard to combining co-existing knowledge objects in texts. "Which knowledge objects should be combined?" is the underlying question driving the actions of these theorizers. In paper number two I focus on organizations as increasingly relevant theorizers who decide whether and how to engage in theorization processes through referencing organizational practices within their self-representation. The decision these social actors have to make is thereby "Which practices do we reference on our websites?" In the third paper of this dissertation I identify antecedents of recommendation decisions made in organizations who have worked with consulting firms. I thereby argue that recommending social actors to some extend vouch for the recommended firms – not legally, but with the relationship quality to the other actors and future business opportunities with these actors (Granovetter, 1992). As such, the decision "Should we recommend the consulting firm?" is not made easily but follows certain rules.

All these decisions concerning the creation and spread of information and knowledge have consequences for other social actors in the social context the decision makers are bound to, while, at the same time, decision makers are themselves influenced by the very social contexts they potentially change and influence through their theorizing. Taking a social constructivist view, in which the cognitive as well as the social aspects of such decisions can be conceptualized and considered, thus represents a particularly promising avenue for answering the developed questions. On this general theoretical basis and with the use of different empirical approaches in the three papers, I come to the conclusion that three major elements should characterize the development and spread of management ideas: First, management ideas only flow when they are labeled and become transportable knowledge objects. Representing the most important system of signs, language thus represents a central driver of knowledge expansion. Second, labeled management ideas do not flow automatically but have to be theorized by different types of social actors who enjoy certain legitimacy in the specific social context. As a result, they may influence the spread of these knowledge objects through publicly accessible media and self-representation channels or through network relations. Despite their capability to change the existing stock of management knowledge, theorizers are thereby also delimited by the boundaries of the social context they are bound to. Third, my results indicate that management ideas do not exist and spread in isolation but that their "career" is contingent upon the existing management knowledge and how they are connected to this stock of knowledge.

With this dissertation I contribute to existing research on the production and spread of management knowledge and thus on the development of rational myths both, conceptually, by deepening and refining the theoretical basis of the concept of theorization and, empirically, by applying new methods of data collection to different empirical settings. Identifying mechanisms and patterns of knowledge production through academic and business press discourse means to understand one of the most powerful filters that influences which beliefs about appropriate and rational managerial behavior have the potential to establish and prevail while others are sorted out. In addition, understanding on which basis organizations select and (symbolically) adopt rational beliefs and when they transfer these beliefs to network partners helps us to explain which beliefs become rational myths that then spread over industries and countries. On this basis, it can be explained and potentially even anticipated which management ideas only become the next management fashion and which are able to persistently shape the organizational landscape.

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