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A STAKEHOLDER PERSPECTIVE TO STUDY ENTERPRISE-WIDE IS INITIATIVES

Research

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Abstract

Over the last decades, information systems (IS) have become pervasive in and inextricably intertwined with organizations. Further, the dialectical interaction between IS and organizations is perceived as one of the major stimuli of organizational strategic moves and transformation. Notwithstanding a plethora of IS artifact-centric discussions in the extant literature, there is a need for an overarching conceptualization that goes beyond specific IS artifacts and simultaneously accounts for a fusion between IS and organizations, which we denominated as enterprise-wide IS initiatives. To afford a paradigm shift towards an enterprise-wide investigation of such a phenomenon, this study opts for a stakeholder perspective and proposes complementary theoretical lenses to conceive the given phenomenon as a stakeholder management endeavor. To assist analyses of this phenomenon, this study also sheds light on the necessity of its investigation in multiple levels of analysis and in different periods of time. This phenomenon is hence further characterized as an emergent, ongoing endeavor. Building on both stakeholder management and emergent analyses, this study proposes a theoretical foundation to guide prospective theorizations on enterprise-wide IS initiatives and discusses its implications.

Keywords: Enterprise-wide IS initiatives, Theoretical foundation, Organizational transformation, Stakeholder management, Emergent change

1 Introduction

Along with the evolution of information systems' (IS) role and impact in organizations, theoretical discourses in IS literature have changed remarkably (Zammuto et al., 2007). The very early discussions treat IS as "automated plumbing" that is used to automate existing operations and to increase the speed of communications (Zammuto et al., 2007). IS scholars later theorize the impact of IS investments on productivity of (Melville et al., 2004) as well as on gaining competitive advantage in organizations (Mata et al., 1995). A turning point is the emergence of enterprise systems as well as systems integration approaches, which yields various theoretical discourses. A manifestation of enterprise systems is the introduction of enterprise resource planning (ERP), supply chain management (SCM), or customer relationship management (CRM) systems (Shang and Seddon, 2002), which allow integration across historically distinct inter- and intra-organizational boundaries. Companies that choose not to adopt such enterprise systems still pursue strategies of systems integration (Markus and Tanis, 2000), such as service oriented architecture (SOA)-based integration. The broad adoption of enterprise systems and systems integration brings about the dialectical interaction between IS and organizations (Orlikowski, 1992) so that nowadays scholars discuss how IS have become inextricably intertwined with and changed the fabric of organizations (Besson and Rowe, 2012; Zammuto et al., 2007).

In the extant IS literature, there is a great amount of research on enterprise systems and systems integration. Further, there are studies on the "ensemble view" of IS (Orlikowski and Iacono, 2001), shedding light on the interaction between IS and organizations, and on the impact of integrated IS solutions

on organizational phenomena (Seddon et al., 2010; Robey et al., 2002). What we are lacking, however, is an overarching conceptualization in which, first of all, both organizational and IS phenomena are studied through one, enterprise-wide, all-embracing lens, and second, organizational transformation and reorientation is theorized in the context of long-term, continuous IS undertakings. We thereupon examine this phenomenon, denominated as *enterprise-wide IS initiatives*.

An enterprise-wide IS initiative is any kind of enduring, transformative initiative that brings together heterogeneous, competing but interdependent stakeholder groups, is centered around the establishment of large-scale (or a significant number of) IS solutions, and simultaneously deals with both organizational and IS artifacts. Such an enterprise-wide endeavor is a common, boundary-spanning effort throughout the organization that aims to achieve global, long-term objectives while dealing with diverse stakeholder groups aiming at their own, often local and short-term, interests. An integral part of success in this multi-stakeholder endeavor is hence the ability to continuously keep the changing interests of stakeholder groups in line with enterprise-wide objectives (Lyytinen and Hirschheim, 1988). Therefore, to study enterprise-wide IS initiatives we opt for a stakeholder perspective. IS scholars have been employing a stakeholder perspective in studying enterprise systems (Sedera et al., 2004; Soh et al., 2011), IS project abandonment (Pan, 2005), IS value (Remenyi and Sherwood-Smith, 1999), dynamics in e-participation (Sæbø et al., 2011), and online trust (Shankar et al., 2002), among others. The stakeholder perspective is even more decisive in the context of enterprise-wide IS initiatives since they touch the entire or a significant part of operations of an organization and involve different stakeholders with diverse and sometimes competing, conflicting interests and expertise (Pouloudi and Whitley, 1997).

The abstract notion of enterprise-wide IS initiatives rises above exemplars¹ of enterprise systems and systems integration, such as ERP, SCM, CRM, and SOA-based integration. As such, the initial goal of this study is to seek for a general conceptualization of enterprise-wide IS initiatives, which is applicable for studying different exemplars through discussing their basic commonalities. The ultimate goal of this study is to propose *a theoretical foundation to guide prospective theorizations* in the pertinent discourses of such a phenomenon. Pursuant to *structure* and *content* of a good theory outlined by Markus and Robey (1988), the proposed theoretical foundation is twofold. First, we propose a two-dimensional view to assist ontological and epistemological assumptions about the phenomenon of interest. We hence argue the necessity of its investigation in both multiple levels of analysis and in different periods of time—concerning the *structure* of a good theory. Second, since we are dealing with a complex and multi-stakeholder phenomenon, this study employs complementary theoretical lenses to guide a *stakeholder analysis* of the phenomenon—concerning the *content* of a good theory. This theoretical foundation is of benefit to the existing IS body of knowledge as it caters a distinct and multifaceted view to the phenomenon of interest.

¹ The term “exemplar” is used to represent any example of enterprise systems and systems integration i.e., large-scale (or integration of a significant number of) IS solutions, for instance ERP, SCM, CRM, SOA-based integration, among others. These information technology-reliant exemplars are an integral part of any enterprise-wide IS initiative.

2 Enterprise-wide IS Initiatives

2.1 Related Work and Motivation

Through (i) going beyond exemplary instantiations of a wide range of discussed enterprise-wide efforts in the literature as well as (ii) taking into consideration state-of-the-art discussions on the dialectic interplay between information technology (IT) and business, this sub-section motivates our conceptualization of enterprise-wide IS initiatives and the need for a theoretical foundation to examine such a phenomenon.

Strategic initiatives, both from a business and IT perspective, have long been the subject of research. Strategic initiatives are deliberate, proactive group undertakings that aim to create economic value for the firm (Lechner and Floyd, 2012). As these strategic initiatives aim to provide important benefits to strategic stakeholders across the organization (MacMillan, 1988; Lechner and Floyd, 2012), they are often realized through boundary-spanning endeavors following an *enterprise-wide perspective*.

From exemplars to the overarching phenomenon: Strategic initiatives take different forms of developmental efforts (Lechner and Floyd, 2012). On the business side, strategic initiatives such as business process reengineering (Grover et al., 1995) are widely discussed. On the IT side, strategic initiatives are IT-reliant (Piccoli and Ives, 2005) and represent large-scale IS endeavors. These IT-reliant strategic initiatives comprise a wide range of *exemplars* such as ERP, CRM, SCM, and SOA-based integration initiatives. Even though these exemplars concern different use cases, they share some fundamental commonalities (Seddon et al., 2010) due to their enterprise-wide perspective and impact. Taking into account these commonalities helps scholars cater an abstract, generalizable understanding of IT-reliant strategic initiatives, which is applicable to different exemplars.

From business-IT alignment to business-IT fusion: Traditionally, IS literature examines IT-reliant strategic initiatives as standalone, merely IS-centric phenomena. Later, IT governance and business-IT alignment (Henderson and Venkatraman, 1993; Luftman et al., 1993; Chan et al., 1997; Brown and Magill, 1994) gain momentum as one of the mainstream topics in IS research, depicting how IT-reliant strategic initiatives must be aligned with and sub-ordinated to business strategies. Over the past decades, however, IS have become pervasive in organizations and impact every single business transaction (Melville et al., 2004) so that scholars started acknowledging IS as a lever for enterprise-wide, strategic change and organizational transformation (Besson and Rowe, 2012; Orlikowski, 1996; Volkoff et al., 2007; Lucas et al., 2013). As such, IS literature recently spotlights the need to rethink the role of IT and to move from the traditional alignment approach towards a *fusion* between business and IT (Bharadwaj et al., 2013). This rethinking of IT's role, in turn, influences the notion of IT governance from merely business-IT alignment (Henderson and Venkatraman, 1993) towards business-IT fusion and eventually leveraging IT-enabled organizational transformation (Van Grembergen and De Haes, 2005). This new approach seeks to investigate strategic initiatives as an *overarching concept*, reflecting both the business and IT sides of the same coin (Bharadwaj et al., 2013; Drnevich and Croson, 2013; El Sawy, 2003) and thus considering IS solutions as an integral part and cornerstone of any strategic initiative (Lucas et al., 2013). Building on this understanding and given the rapid and unrelenting digitalization of business ecosystems and society as a whole, the investigation of such a phenomenon in the context of information systems becomes inevitable.

Enterprise-wide IS initiatives as an overarching phenomenon to grasp business-IT fusion: The aforementioned arguments i.e., (i) IT-reliant strategic initiatives have fundamental common characteristics, subject to closer investigation, and (ii) strategic initiatives should be considered as overarching phenomena that are realized by the adoption of IS solutions, entail a vacant conceptualization which we denominated as *enterprise-wide IS initiatives*. This conceptualization, first, rises above exemplars of IT-reliant strategic initiatives and takes into account commonalities of different exemplars so as to provide a general perception of the phenomenon of interest. Second, in line with the recent discourses

in the literature (Bharadwaj et al., 2013; Drnevich and Croson, 2013), this conceptualization goes beyond the traditional alignment approach and perceives strategic initiatives as an overarching phenomenon—the one that reflects a fusion between business and IT. Further, as suggested by (Lucas et al., 2013), this conceptualization motivates the investigation of organizational strategic moves and transformation in the context of IS. As such, enterprise-wide IS initiative is any kind of transformative undertaking that involves and impacts diverse, competing stakeholder groups across organizational boundaries (enterprise-wide), is centered around the establishment of large-scale or a significant number of IS solutions (enterprise-wide IS), and encompasses a bundle of inter-related business and IS efforts to attain pre-defined strategic intentions (enterprise-wide IS initiative). In that sense, enterprise-wide IS initiative is not a specific exemplar of initiatives (e.g., ERP, CRM, SCM). It rather is an umbrella conceptualization of any kind of large-scale and enterprise-wide IS endeavors in which the achievement of organizational strategic moves and reorientations is highly reliant on the adoption of IS solutions.

Towards a theoretical foundation to guide prospective theorizations on enterprise-wide IS initiatives: To elaborate on the concept of enterprise-wide IS initiatives, the core contribution of this study is a theoretical foundation that comprises: (i) a set of conceptual foci that encourage the investigation of enterprise-wide IS initiatives in multiple levels of analysis and in different periods of time, and (ii) an analytical lens based on complementary theoretical lenses, which are relevant owing to the commonalities of enterprise-wide IS initiatives, to propose a theory-grounded basis to analyze and understand the phenomenon of interest. For the latter, in line with existing studies such as (Lyytinen and Hirschheim, 1988; Pouloudi and Whitley, 1997; Levina, 2005), we opt for a *stakeholder perspective* as a meta-theoretical lens to select and relate complementary theoretical lenses. The stakeholder perspective enables a paradigm shift from isolated, standalone towards an *enterprise-wide investigation* of the phenomenon of interest (Pouloudi, 1999). Through this perspective we hence can afford a holistic representation that views this phenomenon as a joint effort throughout the organization in which diverse, competing, and sometime conflicting interests are concerned.

2.2 Commonalities of Enterprise-wide IS Initiatives

Understanding the fundamental commonalities of enterprise-wide IS initiatives is a prerequisite to our effort in developing a proper and relevant theoretical foundation. Since key issues in IS are mainly managerial in nature (Kappelman et al., 2014) and technical aspects are often exemplar-specific, in discussing these commonalities we focus on organizational rather than technical aspects. More precisely, in line with our meta-theoretical lens, we take into account the stakeholder perspective for outlining commonalities of enterprise-wide IS initiatives. We thereby discuss three main commonalities, namely heterogeneity of stakeholder groups, interdependencies and collaboration among stakeholder groups, as well as dynamics of change.

Heterogeneity of stakeholder groups: By their very nature, enterprise-wide IS initiatives require the involvement of a wide range of stakeholders. Given the wide scope and expected impact of enterprise-wide IS initiatives, specialists from diverse business units need to work together with different kinds of technical specialists and often with external consultants. As diverse as stakeholders' expertise and background, are their concerns, stakes, and interests (Kirsch, 2004; Levina, 2005; Pouloudi and Whitley, 1997; Soh et al., 2011). This includes not only lateral heterogeneity across lines of business, geographies, or functions but also vertical heterogeneity in hierarchical relationships, for instance, among local and global levels (Kirsch, 2004). Due to the heterogeneity of stakeholder groups, even though the potential for creating innovative outcomes is considerable, the potential for conflict and stagnation is even higher (Levina, 2005; Lyytinen and Hirschheim, 1988). Therefore, conflict resolution becomes one of the key management competencies (Kochan and Rubinstein, 2000) so that depending on how it is managed, conflict can result in either productive or destructive outcomes (Robey et al., 1989). As such, the key is to understand the entire set of stakeholder relationships, their heterogeneity, on-going conflict, and collaboration (Sachs et al., 2002).

Interdependencies and collaboration among stakeholder groups: Even though stakeholders have divergent priorities and goals, their complementary skills and knowledge are crucial to the success of enterprise-wide IS initiatives (Kirsch, 2004). Heterogeneous stakeholder groups have interdependencies and need to collaborate with one another across hierarchical levels (local and global) and across organizational boundaries (business lines and geographies) to contribute to a common effort (Hardy et al., 2005; Nowell, 2009). Interdependence is the extent to which an organization's members require to conduct their tasks closely with one another that is to coordinate their activities (Thompson, 1967). Collaboration, in turn, is a "process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible" (Gray, 1989 p.5). Stakeholders are thus involved in a system of dyadic collaborations in which multiple and interdependent interactions simultaneously exist (Rowley, 1997). When heterogeneous stakeholders across organizational hierarchies and boundaries must work together in the solution of complex problems, while conserving budget, resources, and time, the potential for conflict increases (Robey et al., 1989). Since interdependence impacts the dynamics and outcomes of collaboration (Tjosvold, 1988), the necessity of *effective collaboration* i.e., constructive dialogue and coordination practices among stakeholder groups to negotiate their competing values and interests, becomes essential (Levina, 2005; Kirsch, 2004).

Dynamics of change: In today's organizations, fast-moving change has become the normal rather than exceptional mode of organizational life (Tsoukas and Chia, 2002). In effect, organization is the attempt to order the intrinsic flux of human actions and is a pattern that is constituted and shaped by, and that emerges from change (Tsoukas and Chia, 2002). In such an organizational context, enterprise-wide IS initiative is a dynamic phenomenon that has to continuously deal with change in both business and technology environments. The dynamics of change in business and technology environments, and relations among them, have been frequently acknowledged in existing studies (Zammuto et al., 2007). Consequently, the dynamics of the stakeholders' view has also been reflected in seminal studies such as (Mitchell et al., 1997; Jawahar and McLaughlin, 2001; Kochan and Rubinstein, 2000). They argue that stakeholders' attributes and the importance of stakeholder groups is not a steady state and that these, in the same given context, can vary from issue to issue, from time to time, and from one stage to the next (Mitchell et al., 1997; Jawahar and McLaughlin, 2001). As such, in enterprise-wide IS initiatives the saliency of stakeholders (Sæbø et al., 2011) and the number of and relations among stakeholders (Pouloudi and Whitley, 1997) *change over time*. Therefore, a thorough understanding of how enterprise-wide IS initiatives bring about organizational transformation requires considering their temporal dynamics and adaptive behaviors i.e., how changes occur over time, how enterprise-wide IS initiatives dynamically react to changes in different time episodes, and how organizational transformation emerges from this process.

3 A Theoretical Foundation to Study Enterprise-wide IS Initiatives

Building on our understanding of enterprise-wide IS initiatives and their commonalities as well as in line with *structure* and *content* of a good theory outlined by Markus and Robey (1988), we propose a theoretical foundation to study the phenomenon of interest. **First**, concerning the *structure of a good theory* (Markus and Robey, 1988), we outline a two-dimensional view to guide the derivation of theories in enterprise-wide IS initiatives. The proposed structure is composed of a *multi-level analysis* dimension as well as a *time* dimension. These dimensions follow the discussed commonalities of enterprise-wide IS initiatives (Section 2.2). While the multi-level analysis dimension is mainly related to the heterogeneity of stakeholder groups and their interdependencies and collaboration, the time dimension is mainly related to the dynamics of change in enterprise-wide IS initiatives. Finally, through combination of these two dimensions, we conceptualize enterprise-wide IS initiatives as an *emergent phenomenon*.

Second, as the *content of a good theory* (the used concepts and lenses) is another important aspect (Markus and Robey, 1988), we propose an analytical lens to study enterprise-wide IS initiatives. Enterprise-wide IS initiative is a complex, multi-faceted phenomenon so that a thorough investigation requires its analysis from different viewpoints. We thereby use *complementary theoretical lenses* to propose an analytical lens. This analytical lens is not only informed by a stakeholder perspective—as our meta-theoretical approach to select and relate complementary theoretical lenses. It is also informed by the basic commonalities of enterprise-wide IS initiatives (section 2.2). Accordingly, we conceptualize enterprise-wide IS initiatives as a *stakeholder management endeavor* that concerns heterogeneity of stakeholders as well as their interdependencies, competing interests, and collaboration. The above-mentioned two-dimensional view (concerning structure of a good theory) together with the analytical lens (concerning content of a good theory) shape the constitutive elements of the proposed theoretical foundation in studying enterprise-wide IS initiatives (see Table 1).

Constitutive elements			Description
Theory structure (assumptions about the nature and direction of causal influence)	Enterprise-wide IS initiatives as an emergent phenomenon (an ongoing endeavor)	<i>Multi-level analysis</i> : Examining enterprise-wide IS initiatives within and across multiple levels of analysis to understand how global results are originated in local actions	Conceptualization of enterprise-wide IS initiatives as a longitudinal, dialectic interplay between competing stakeholders’ interests in which organizations learn over time how to achieve the expected outcomes
		<i>Time</i> : Investigating the dynamics of enterprise-wide IS initiatives over time to analyze how outcomes are created along this journey and how the journey itself emerges	
Theory content (the specific concepts/lenses used)	Enterprise-wide IS initiatives as a stakeholder management endeavor		Conceptualization of enterprise-wide IS initiatives as an endeavor to capture salient stakeholder groups and to foster effective collaboration practices among them

Table 1. Constitutive Elements of the proposed Theoretical Foundation in Studying Enterprise-wide IS Initiatives—based on Markus and Robey (1988)

3.1 Enterprise-wide IS Initiatives as an Emergent Phenomenon

Multi-level analysis dimension: Multi-level analysis of a phenomenon has quite a long history in management/organization science studies (Klein et al., 1994; Rousseau, 1985; Hofmann, 1997; Morgeson and Hofmann, 1999). By their very nature, organizations are multi-level and due to their inherently hierarchical and lateral nature, data collected in organizations consist of nested entities (Klein et al., 1994; Hofmann, 1997) so that variables at one hierarchical level can influence variables at another hierarchical level (Hofmann, 1997). Therefore, “theories must be built with explicit description of the levels to which *generalization is appropriate*” (Rousseau, 1985 p.6). By choosing a limited or wrong level of analysis, researchers commit a fallacy of the wrong level so that the resulted insights from the research may seriously misrepresent the relationships and contain erroneous conclusions (Klein et al., 1994). As such, the abovementioned facts call for multi-level research.

Multi-level research refers to any research that “entails more than one level of conceptualization” (Kozlowski and Klein, 2000 p.79) and draws conclusions regarding the influence of phenomena at different levels of analysis (Hofmann, 1997). This type of research postulates relationships among variables which apply not only at the same level of analysis (lateral) but also at two or more levels of analysis (vertical/hierarchical) (Rousseau, 1985; Dansereau et al., 1999). While the former examines how variables relate among units of observation in the same level of analysis (e.g., in different local

units), the latter demonstrates the aggregation of relations across different levels of analysis (both top-down and bottom-up among local and global units). Therefore, a multi-level research should consider relations within and across levels of analysis to cater a thorough understanding of the phenomenon.

Although questions about the proper level of analysis have been intensively debated in management/organization science, they have barely been explicitly discussed in IS literature. Initially Markus and Robey (1988) and lately Lyytinen and Newman (2008) brought multi-level analysis to the forefront of IS research. Markus and Robey argue that IT should be investigated in both micro (individuals and small groups) and macro (large-scale collectives e.g., organization, population, society) levels of analysis. Similarly, Lyytinen and Newman conceptualize multi-level analysis of IS phenomena in a hierarchy of work system, building system, organizational context, and organizational environment. Very recently, Bélanger et al. (2014) offer a guidance for conducting multi-level research in IS.

Time dimension: “Truth is the daughter of time” (Pettigrew, 1990) so that time is an “intrinsic property of consciousness” rather than a boundary condition (George and Jones, 2000). The time dimension of a phenomenon (George and Jones, 2000; Avital, 2000; Pettigrew, 1990; Miller and Friesen, 1982) has to be explicitly incorporated into a theory to provide an ontologically accurate description (George and Jones, 2000) and a broader knowledge of the nature of the phenomenon (Miller and Friesen, 1982).

Considering the time dimension in a research project can totally change the way theoretical constructs and their relations are conceptualized (George and Jones, 2000; Avital, 2000). In effect, “the past preconditions the present and is responsible for its taken-for-granted nature; the future is embedded in the present in terms of expectations, possibilities, and strivings” (George and Jones, 2000 p.659). The way in which phenomena are aggregated over time has important implications for research (George and Jones, 2000). As such, studying various organizational and technological (e.g., IS) phenomena requires careful attention to the occurrence of events over time (Avital, 2000). This implies the investigation of the given phenomenon in a long *journey* through which researchers aim to make a movie of chronological events instead of taking short-time, single-snapshots of the phenomenon. This effort helps scholars understand the *dynamics* and the de facto complexity of the phenomenon of interest.

Combination of dimensions: Studying IS phenomena *one level at a time* will ultimately lead to an unnatural, incomplete, and very disjointed view of the phenomenon of interest (Burton-Jones and Gallivan, 2007). This fact is even more decisive in enterprise-wide IS initiatives due to their discussed nature and commonalities. As already pointed out (see section 2.2), enterprise-wide IS initiatives require collaboration among heterogeneous groups of stakeholders at lower (local, single action, individual, project) levels to manifest the strategic impact of these initiatives at the higher (global, collective action, enterprise-wide) levels. This hence applies for the lateral collaboration among stakeholder groups in the same level of analysis (business lines and geographies) as well as in different levels of analysis (local and global). Further, owing to the extensive scope and expected strategic impacts, enterprise-wide IS initiatives are lengthy in duration and are supposed to be dynamic in change.

Therefore, in line with the outlined aspects of organizational and IS change by (Pettigrew, 1985; Lyytinen and Newman, 2008) and inspired by the discussed characteristics of multi-dimensional phenomena by (Kozlowski et al., 2013), we define three conceptual foci for studying enterprise-wide IS initiatives:

- *Enterprise-wide IS initiatives are multi-level:* they require different levels of analysis, levels at which IS initiatives originate and levels at which the collective and strategic impact manifest.
- *Enterprise-wide IS initiatives are dynamic:* The substantive emphasis is on the mechanisms that drive the dynamic interactions among involved stakeholder groups that yield the emerged state of enterprise-wide IS initiatives. This, in fact, explains the process through which enterprise-wide IS initiatives become linked within and across levels.

- *Enterprise-wide IS initiatives take time to manifest the collective and strategic impact.* In this long journey, the given initiatives can lose momentum (temporary or permanently), change the initial plans, or emerge to new strategic intentions.

These conceptual foci entail the investigation of enterprise-wide IS initiatives along both the multi-level analysis and the time dimensions. This approach is said to be *contextualist* in character (Pettigrew, 1985) in which while the multi-level analysis dimension explains the interconnections within and across levels of analysis, the time dimension describes the sequential interconnectedness through time. Therefore, in line with existing studies in management/organization science and IS literature (Van de Ven and Poole, 2005; Markus and Robey, 1988; Kozlowski et al., 2013), the outlined conceptual foci imply to conceptualize enterprise-wide IS initiatives as an *emergent phenomenon*.

“A phenomenon is emergent when it originates in the cognition, affect, behaviors, or other characteristics of individuals, is amplified by their interactions, and manifests as a higher-level, collective phenomenon” (Kozlowski and Klein, 2000 p.55). The emergent perspective studies organizations-in-creation (Katz and Gartner, 1988) and assumes that people try to achieve goals but acknowledge that the outcomes are often different from those intended—sometimes better and sometimes worse (Markus and Tanis, 2000). This is due to complex interactions within and across levels of analysis and constant changes in the mode of interactions over time that eventually make the outcome of interactions unpredictable. Therefore, the emergent perspective differs from deterministic arguments (Markus and Robey, 1988) and uncovers the de facto complexity and the dynamics of enterprise-wide IS initiatives over time. To guide prospective theorizations of enterprise-wide IS initiatives as an emergent phenomenon, we propose *process theory* as well as *organizational learning theory* as means for *journey analyses*.

Process theory-based (vs. variance theory-based) analysis of enterprise-wide IS initiatives:

Coined by Mohr (1982), the process vs. variance (emergent vs. deterministic) discussion has enjoyed a wide uptake in management/organization science (Van de Ven and Poole, 2005; Van de Ven and Huber, 1990; Pentland, 1999) as well as in IS research (Markus and Robey, 1988; Shaw and Jarvenpaa, 1997; Burton-Jones et al., 2014). “Process theory presents a series of occurrences in a sequence over time so as to explain how some phenomenon comes about” (Mohr, 1982 p.9). Process theories help analyze critical events and turning points, contextual influence, formative patterns that give overall direction to the change, and factors that influence the sequencing of events (Van de Ven and Poole, 2005). This sequence is probabilistic rather than deterministic as a different sequence of events might occur (Markus and Robey, 1988; Mohr, 1982). Since process theories examine a chain of events and their states through time, they enable scholars to explain enterprise-wide IS initiatives as a dynamic phenomenon. Referring to the metaphor of taking pictures vs. making a movie, process theories explain the longitudinal, chronological story of the degree of association among variables within and across levels of analysis and thereby provide a thorough means for journey analyses.

As outlined by (Mohr, 1982; Pettigrew, 1997; Van de Ven and Huber, 1990; Markus and Robey, 1988), we propose three main components (constructs) of the process theory, namely antecedents, process (event), and outcomes to be analyzed in the studies of enterprise-wide IS initiatives. *Antecedents*, which trigger a process and form its main configuration, consist of external contextual factors (e.g., economic, social, political) and internal contextual factors (e.g., the organizational culture). *Process* is a sequence of individual and collective *events (turning points)* unfolding over time. Finally, *outcomes* are the results of each event and process. Concerning the temporal predispositions, these three components can be examined in past, present, and future timelines (Zimbardo and Boyd, 1999) in the studies of enterprise-wide IS initiatives. By doing so, researchers analyze antecedents and outcomes of different change events in enterprise-wide IS initiatives in the past, present, and future.

Van de Ven and Poole (1995) define four basic types of process theories based on different conceptual motors namely, life cycle, teleology, dialectics, and evolution. For our theoretical foundation, we opt for a *dialectic process theory* that concerns “a pluralistic world of colliding events, forces, or contradictory values that compete with each other for domination and control. [...] In dialectic process theo-

ry, stability and change are explained by reference to the balance of power between opposing entities” (Van de Ven and Poole, 1995 p.517). Due to our stakeholder view to enterprise-wide IS initiatives, in terms of balancing power and concerns of heterogeneous stakeholder groups within and across levels of analysis, dialectic process theory is of outmost interest to explain the dialectic interplay between diverging, competing stakeholders’ value and believe systems. As such, the dialectic mechanism is concerned with a *constructive mode of change over time* and with *multiple levels of analysis* (Van de Ven and Poole, 1995).

Dialectic learning analysis of enterprise-wide IS initiatives: Organizational learning is essential for an organization’s survival in a changing environment. Lytinen and Robey (1999) illustrate the lack of organizational learning mechanisms as the main reason of failure in IS undertakings. Organizational learning is a process in which knowledge is acquired, created, interpreted, distributed, stored, and retrieved (Huber, 1991; Dodgson, 1993). One of the major sources of knowledge is an organization’s own experience, which is the main form of experiential learning (Huber, 1991). Since enterprise-wide IS initiatives are lengthy undertakings, organizations experience a great deal of success stories as well as deviations and obstacles over time. Organizations thus learn from their failures, which are called “intelligent failures” (Sitkin, 1992; Cannon and Edmondson, 2005), as well as from success stories in the other parts of the organization (e.g., in a local unit).

Although the use of process theories helps scholars to analyze the long journey in the adoption of enterprise-wide IS initiatives, an organizational leaning approach provides a fruitful basis to analyze how organizations learn over time from their short-term failures and success to successfully establish such lengthy strategic initiatives. As such, next to the proposed process-theory based analysis, we have to acknowledge that this chronological, longitudinal process is not a neutral set of change events. Contrary, the process-theory based analysis should delineate this long journey as a *dialectic process of learning* (Robey et al., 2002)—a dialectic between the old knowledge (opposing change event) as well as the new knowledge (promoting change event) that has been acquired along with different steps of establishing enterprise-wide IS initiatives. Therefore, process-theory based analysis should illustrate enterprise-wide IS initiatives as a learning process in which outcomes (failures and success stories) of each stage are used as an antecedent (lesson learned) for the next stage to guarantee the success of the enterprise-wide IS initiative.

3.2 Enterprise-wide IS Initiatives as a Stakeholder Management Endeavor

One of the most popular trends in business literature is stakeholder management and identification (Rowley, 1997) that originates in Freeman’s landmark book (Freeman, 1984) who brought stakeholder theory to the forefront of academic research. Stakeholder management is the development and implementation of organizational policies and practices that take into account goals and concerns of all relevant stakeholders (Sachs et al., 2002). Due to the heterogeneity of stakeholders and the complexity of their collaboration in enterprise-wide IS initiatives (concerning the outlined commonalities in Section 2.2), stakeholder management becomes a highly collaborative, interactive, and interdisciplinary endeavor. To conceptualize enterprise-wide IS initiatives as a stakeholder management endeavor, we hence lay emphasis not only (i) on the identification and on understanding the salience of stakeholders—an attempt to articulate a taxonomy of stakeholders deserving or requiring management attention; but also (ii) on the mechanisms and tools to foster effective collaboration among diverse stakeholder groups within and across levels of analysis. To this end, we propose the *theory of stakeholder identification and salience* as well as the *theory of effective collaboration* (through *collective identity* and *boundary objects*) as theoretical lenses.

Theory of stakeholder identification and salience: This theory is built on the stakeholder theory. Stakeholder theory has been advanced and justified in management science literature due to its descriptive accuracy, instrumental power, and normative validity (Donaldson and Preston, 1995). Even in the most interconnected networks and even under conditions of high centrality, managers do attend to certain stakeholders more than others because of time and cognitive constraints (Scott and Lane,

2000). Therefore, one of the most promising advances on the stakeholder theory is the theory of stakeholder identification and salience. The latter argues that the manager's perception of a stakeholder's attributes is critical to the manager's view of stakeholder salience (Mitchell et al., 1997). As such, this theory conceptualizes the salience of a stakeholder, i.e. "the degree to which managers give priority to competing stakeholder claims" (Mitchell et al., 1997 p.854). This theory also proposes a comprehensive typology of stakeholders by arguing that, classes of stakeholders can be identified by their possession or attributed possession of one, two, or all three of the following attributes: (1) the stakeholder's *power* to influence the firm, (2) the *legitimacy* of the stakeholder's relationship with the firm, and (3) the *urgency* of the stakeholder's claim on the firm (Mitchell et al., 1997). Accordingly, the main constructs of this theory are power, legitimacy, urgency, and salience so that a stakeholders' salience can be identified by the possession of power, legitimacy, and urgency. Stakeholders can be classified as *latent* stakeholders (low salience) if they hold only one of the power, legitimacy, or urgency attributes. The moderately salient stakeholders are those who hold two of these attributes, classified as *expectant* stakeholders. Finally, stakeholder salience will be high where all of these three attributes are perceived by managers to be present, classified as *definitive* stakeholders (for sub-classes of latent, expectant, and definitive stakeholders, please see (Mitchell et al., 1997)).

The theory of stakeholder identification and salience thus caters a theoretically sound basis to systematically identify stakeholders and to analyze their saliency in enterprise-wide IS initiatives. By doing so, scholars will be able to classify stakeholder groups within and across levels of analysis and analyze their saliency at each stage of the given enterprise-wide IS initiative. This provides a powerful stakeholder analysis means to explain how saliency of stakeholders, and changes in the saliency of stakeholders over time, brings about the emergence of an enterprise-wide IS initiative's status quo.

Theory of effective collaboration²: Even though Lyytinen and Hirschheim (1988) argue that stakeholders' expected values of IS originate mainly from the interests diverse stakeholders try to pursue, *common interests among stakeholders do not easily translate into cooperative action*, instead may cause conflict among stakeholder groups (Levina, 2005). This potential conflict among stakeholder groups serves as a motivation to reinforce *effective collaboration*. To conceptualize effective collaboration among stakeholder groups, IS literature often uses the term coordination, acquired from coordination theory (Malone and Crowston, 1990). Nevertheless, in line with Hoegl and Gemuenden (2001) (in management/organization science) as well as Levina (2005) (in IS literature), we opt for coordination as one critical facet of effective collaboration.

Effective collaboration is cooperative action that produces innovative, synergistic solutions and balances divergent stakeholder concerns (Hardy et al., 2005). To realize effective collaboration among stakeholder groups in enterprise-wide IS initiatives, there is a need to understand the actual collaborative practices among stakeholder groups and how concerns of heterogeneous stakeholder groups become balanced. One of the prerequisites to realize effective collaboration is the development of and a desire to express *collective identity* among heterogeneous stakeholder groups (Hardy et al., 2005; Levina, 2005; Rowley and Moldoveanu, 2003) through which some of their differences and commonalities are negotiated. Collective identity is a meaningful and shared artifact among divergent stakeholder groups who engage in the discursive practices that produce and reproduce it over time (Hardy et al., 2005; Levina, 2005). Therefore, stakeholder groups share and negotiate the meaning attached to the artifacts they produce to represent their separate, competing, and joint competencies and interests (Levina, 2005). Collective identities are thus shaped in different levels of analysis so that identities are relatively isomorphic across levels because organizational goals require some internal coherence (Ashforth et al., 2011).

² Similar to Levina (2005), we use the term "effective collaboration" for this category of theory. Nevertheless, it is noteworthy that there is no specific theory with this exact naming. Effective collaboration is used to reflect essential theoretical assumptions about collaboration practices in collective identity and boundary objects theories.

Further, to analyze effective collaboration, we also need to understand how stakeholder groups produce, share, and use explicit artifacts that are representative of their collective identity (Levina, 2005). This can be represented through *boundary objects* (Levina, 2005). “Boundary objects are objects which are both plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across sites” (Star and Griesemer, 1989 p.393). Boundary objects can take different forms such as models and sketches (Star, 1989; Carlile, 2002), standardized forms and methods (Star, 1989; Carlile, 2002; Star and Griesemer, 1989), prototypes (Carlile, 2004), shared IT applications (Pawlowski and Robey, 2004), and repositories (Star, 1989; Carlile, 2002). Artifacts only can become boundary objects once they can establish a collective identity across stakeholder groups (Levina, 2005). Therefore, the main constructs of effective collaboration are collaborative (boundary) practices, collective identities, and boundary objects so that boundary objects mediate collaborative practices and maintain collective identities among stakeholder groups (Gal et al., 2008). As such, boundary objects are central to effective collaboration as they represent collective identities and impact the effectiveness of collaborative practices.

The use of theory of effective collaboration helps scholars analyze: how collective identity among stakeholder groups in different levels of analysis is negotiated, how it is represented in boundary objects (e.g., models, prototypes, maps, methods), how these mechanisms work together towards effective collaboration and manifestation of expected outcomes of the given enterprise-wide IS initiative, and how dynamically boundary objects adapt over time to reflect the changing collaborative practices. In turn, the theory of stakeholder identification and salience provides a basis to derive and/or understand boundary spanner roles and the requirements for boundary spanning artifacts.

4 Conclusion

4.1 Summary and Contribution

This study introduces enterprise-wide IS initiatives as an overarching concept that goes beyond exemplars of enterprise systems and systems integration initiatives. With regard to structure and content of a theory (Markus and Robey, 1988), we conceptualize enterprise-wide IS initiatives as an emergent phenomenon (concerning structure) and as a stakeholder management endeavor (concerning content). The emergent approach conceptualizes enterprise-wide IS initiatives as a multi-level and dynamic phenomenon that the manifestation of the expected strategic impact takes time, as such should be investigated in different periods of time, and is reliant on the dynamic and learning-based interactions within and across levels of analysis. The stakeholder management approach, in turn, conceptualizes enterprise-wide IS initiatives as an endeavor to prioritize stakeholders and to negotiate interests of salient stakeholders in collaboration practices. For both conceptualizations (emergent and stakeholder management), we propose different theoretical bases and explain how they can be employed to capture intrinsic complexities of the phenomenon of interest. Our conceptualization of enterprise-wide IS initiatives, as an emergent and a stakeholder management endeavor, shapes a theoretical foundation to guide prospective theorizations in the phenomenon of interest’s pertinent discourses.

In line with the recent discussions in IS literature (Bharadwaj et al., 2013; Drnevich and Croson, 2013), this study goes beyond the traditional business-IT alignment approach and views enterprise-wide IS initiative as a fusion between business and IT in which IS is the cornerstone of organizational transformation. As such, even though the fusion between IT and business is considered, our conceptualization of enterprise-wide IS initiatives motivates the investigation of organizational strategic moves and transformation in the context of IS. Further, as pointed out in a literature review on IT governance by Brown and Grant (2005), the extant literature has been dominated by either patterns and archetypes of IT governance (Brown and Grant, 2005; Weill and Ross, 2004; Brown, 1997; Brown and Magill, 1994; Xue et al., 2008)—introducing centralized, decentralized, and federal governance modes—or by contingency factors influencing IT governance structure (Sambamurthy and Zmud, 1999). Neverthe-

less, since various stakeholders exercise their power and legitimacy in IT decisions, it is of utmost value to understand how and due to which antecedents organizations actually govern IT decisions in different points of time (Xue et al., 2008). Therefore, the proposed stakeholder, emergent perspective in the study at hand proposes a non-deterministic approach to explain how diverse, competing, and sometime conflicting interests of heterogeneous stakeholders impact major IT decisions and how IT governance structure emerges from this dialectic interplay.

4.2 Limitations

Owing to its selective approach in proposing the theoretical foundation, this study has certain limitations. First, compared to studies such as (Markus and Robey, 1988; Van de Ven and Poole, 2005), which provide an exhaustive structure of theory in which scholars can choose different combinations of the discussed dimensions, we propose a structure that outlines the desired combination of dimensions. Nevertheless, the derived theoretical foundation grants a premediated guideline on how and from which angles the given phenomenon can be examined. Second, one can argue that the selection of relevant theories has been restricted to a stakeholder view of the phenomenon. Due to the formulated characteristics of the phenomenon, other theoretical lenses such as [adaptive] structuration theory, institutional theory, actor-network theory, among others, can also be relevant. Notwithstanding this factual limitation, we claim that the stakeholder view enables a paradigm shift from standalone to an overarching investigation of enterprise-wide IS initiatives, as it concerns diverse stakeholder groups (in both business and IT sides) and their effective collaboration to realize the fusion between business and IT and eventually IT-enabled organizational transformation. It also awards an overarching vantage point to examine any exemplar of enterprise-wide IS initiatives.

4.3 Implications for Prospective Research

Owing to its abstract conceptualization, the proposed stream of reasoning can be used in the study of any exemplar of enterprise-wide IS initiatives (e.g., ERP, SCM, CRM, application integration) and provides a basis to learn from the existing body of knowledge in exemplars' studies. We encourage scholars to employ the proposed theoretical foundation in investigating exemplars' success, failure, abandonment, adaptive behavior, and patterns. Concerning the use of the proposed theoretical lenses, it is noteworthy that our theoretical foundation is not deterministic because other conceptual syntheses of the discussed or alternative theories can be assumed. Therefore, the proposed theoretical foundation can be used either as a "sensitizing" (Klein and Myers, 1999) or as a "scaffolding" (Walsham, 1995) device. The former suggests viewing the phenomenon of interest in a certain way (as we suggested in our proposed theoretical lenses) throughout the prospective studies—spanning from initial conceptualization down to data interpretation. The latter makes us aware of a danger of using theories in a rigid way that brings about seeing a phenomenon only based on what the employed theories suggest. Therefore, the proposed theoretical lenses can be used in an iterative process of data collection and analysis, with initial theoretical lenses being expanded, revised, or abandoned.

Ending note: We have not distinguished management and organization sciences in the investigation of "business" literature. Therefore, we have used management/organization science together throughout the paper.

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