



Pluralist Theory Building: A Methodology for Generalizing from Data to Theory

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Abstract

We propose pluralist theory building as a methodology that leverages the power of multiperspective inquiry to develop new theory from data. The paper presents the rationale for the methodology, its combination of generalization and pluralism, and the process involved in its application. When researchers use pluralist theory building, they move between description and theory and between single and multiple perspectives through four iterative steps with specific deliverables: create perspective accounts, synthesize multiperspective account, create theory fragments, and synthesize pluralist theory. Drawing on a study that served as experiential background for developing the methodology, we offer insights into the challenges involved in using the methodology and the activities in which researchers may engage to address these challenges. In conclusion, we argue that pluralist theory building offers a novel and practically useful approach to empirically based theorizing that leverages Mingers's pragmatic approach to pluralism (2001) and extends Lee and Baskerville's (2003) generalization framework into a detailed iterative process with steps, deliverables, challenges, and activities.

Keywords: Pluralism, Theory Building, Theorizing, Generalization, Metatheory

Walter Fernandez was the accepting senior editor. This research article was submitted on February 21, 2017, and underwent two revisions.

1 Introduction

Information systems (IS) researchers' interests vary from traditional topics such as systems development and technology management to the economics of IS, virtual teams, data analytics, social media, Internet of things, and mobile technologies. To explore these wide-ranging topics, researchers draw on a broad array of reference disciplines, including psychology, anthropology, sociology, linguistics, mathematics, computer science, and management science. Thus, IS research is grounded in a wide range of research traditions and paradigms, each with its own theoretical assumptions and perspectives.

As the IS discipline matures, calls for more ambitious theorizing and native IS theories are mounting (Chiasson & Davidson, 2005; Grover & Lyytinen, 2015; Lee, 2001; Orlikowski & Iacono, 2001; Weber, 2003) in response to criticism of overreliance on reference discipline theories (Baskerville & Myers, 2002; Benbasat & Zmud, 2003). However, despite this growing interest in generalization and theorizing, there are only a few methodologies that provide guidance on how to build and present new IS theory (e.g., Martinsons et al., 2015; Remenyi & Williams, 1996; Carroll & Swatman, 2000; Weber, 2003, 2012; Rivard, 2014) and virtually none that addresses how to leverage the diversity of perspectives that is characteristic of the IS discipline. Although several papers combine perspectives in investigating and

theorizing IS phenomena (e.g., Henfridsson, Mathiassen, & Svahn, 2014; Jasperson et al., 2002; Singh, Mathiassen, & Mishra, 2015), they do not elaborate and explain how the underlying research and theory building process may be applied by other researchers to advance knowledge. At the same time, the general literature on theory building is abstract and lacks practical guidance (e.g., Sutton & Staw, 1995; Weick, 1995). Lewis and Grimes's (1999) study is one notable exception, although our experiences, as elaborated below, indicate that it is difficult to translate their strategy for empirically driven theorizing into research practice. Thus, there is a need for comprehensive and practicable methodologies that IS researchers can use to build theory from data by leveraging the diversity of perspectives that characterizes the discipline.

In this paper, we propose and showcase pluralist theory building as a research methodology that allows researchers to use multiple theoretical perspectives to build theory based on data. The methodology develops Lee and Baskerville's (2003) generalization framework with its four types of generalization into a practical process that allows researchers to move between empirical description and theory building. In addition, it draws on Mingers's (1997, 1999) pluralism grounded in critical realism to help researchers address complex real-world problems that are contingent upon a plurality of factors. Mingers's pragmatic approach to using multiple theoretical perspectives (2001) focuses on making sense of data rather than on philosophical concerns related to conflicting paradigms (Lewis & Grimes, 1999); in doing so, it helps researchers develop and articulate a deep empirical understanding that can be used as a strong foundation for building new theory. Such an approach requires, however, access to rich qualitative—and possibly quantitative—data about the studied real-world phenomena and their contexts.

We showcase the advantages of adding pluralist theory building to the IS researcher's toolbox by drawing on a recent study (Müller et al., 2017) in which we theorize about politics during process innovation based on rich, multidimensional data. The study uses different perspectives on organizational politics (Bradshaw-Camball & Murray, 1991) to synthesize a comprehensive empirical account and build new theory. It also serves as experiential basis for developing pluralist theory building as an IS theory building methodology. As such, our paper addresses Mingers's call for research into "alternative theoretical frameworks to provide practical guidance for multimethod design" (Mingers, 2001, p. 257) by combining Lee and Baskerville's generalization framework with multiperspective inquiry into a practical process for empirically based theory building using multiple theoretical perspectives.

The paper proceeds as follows. We start by summarizing our experiences that led to developing the methodology in the Experiential Background section. Next, in the Theoretical Foundation section, we review the role of generalization and current use of pluralism in IS research. We then present pluralist theory building in the Proposed Methodology section by describing its overall architecture, iterative steps, and key deliverables. In the Illustration and Guidelines section, we present experiences from our study of politics during process innovation (Müller et al., 2017) and draw on these to offer guidelines that detail the activities for each step of the methodology. Finally, we articulate the contribution of this research in the Discussion section by relating to other research methodologies and theory building strategies within the IS discipline.

2 Experiential Background

Our study of politics during process innovation was an action research project (Chiasson, Germonprez, & Mathiassen, 2009; Mathiassen, 2002) in which we collected data over several years from multiple sources using mixed methods (including stakeholder interviews, participant observations, process maturity assessments, and archival documents). The resulting paper has been published recently in one of the leading IS journals. To draw on our experiences with building theory from both qualitative and quantitative data, we rely on documentation of the theorizing and related review process (including minutes of meetings between the researchers, feedback from journal reviewers and editors, and the evolving versions of the manuscript). Throughout the theory building process, we leveraged the power of multiperspective inquiry.

Initially, we relied on metatriangulation (Lewis & Grimes, 1999) to apply multiple theoretical perspectives to develop a comprehensive empirical account and new theory. Although many researchers have successfully used metatriangulation to theorize based on literature, no studies (since the publication of Lewis and Grimes's paper) have used the methodology to develop new theory based on data as suggested by the authors. Hence, we wanted to explore the practicality of metatriangulation for empirically based theory building. However, as we applied metatriangulation to our data, we found it difficult to translate its ideas about analyzing transition zones between perspectives and converting a metaparadigm perspective into practical theory building. After much trial and error, we therefore moved away from metatriangulation's rather abstract recommendations and instead approached multiperspective inquiry pragmatically to make sense of the data. As a result, we eventually drew on the IS literature on theorizing (Lee & Baskerville, 2003; Mingers, 1997, 1999) to develop our own approach to pluralist theory building.

Our process innovation politics paper (Müller et al., 2017) presents an embedded case study of a company-wide process innovation project across four business units in which we use contrasting theoretical perspectives on organizational politics (Bradshaw-Camball & Murray, 1991) to analyze and describe each unit's response to the project. Based on cross-case analyses and the extant literature, we theorize how organizational actors engage in politics during process innovation efforts. As such, we leverage multiple perspectives in our theorizing efforts by generalizing from data to empirical accounts and theoretical statements, eventually arriving at new theory and—as shown in this paper—a pluralist methodology for empirically based theory building. In the following, we draw on this background and on key lessons learned to present and illustrate the proposed methodology and to discuss its contributions to IS research methodology. As our study and paper development process provided the experiential background, we did not in a strict sense apply pluralist theory building as presented here in the study. However, for the sake of simplicity, we refer to our application of the methodology.

3 Theoretical Foundation

In the following, we provide an overview of the IS literature on generalization and pluralism as it relates to theory building. Rather than providing an exhaustive review of the literature on theory building, we describe the key sources we draw upon in pluralist theory building.

3.1 Generalization: Between Description and Theory

The role of generalization in the context of theory building has been discussed by IS scholars for years. Whereas Weber defines theory as “a particular kind of model that is intended to account for some subset of phenomena in the real world” (Weber, 2012, p. 4), Seddon and Scheepers describe generalization as “the researcher's act of arguing, by induction, that there is a reasonable expectation that a knowledge claim already believed to be true in one or more settings is also true in other clearly defined settings” (Seddon & Scheepers, 2012, p. 7). Thus, theory building is a form of generalization.

IS researchers have addressed theory building, including Carroll and Swatman who present a framework for interpretive theory building from qualitative data (Carroll & Swatman, 2000), and Remenyi and Williams who explore the importance of qualitative data and narratives in developing

theoretical conjectures and empirical generalizations (Remenyi & Williams, 1996). There are, however, few IS papers that provide comprehensive and practical guidance on how to build new IS theory (Weber, 2003, 2012). In key reference disciplines, there is more practical guidance as exemplified by (Eisenhardt, 1989) in the management literature, which describes the process of theory building in case study research from a positivist view, including performing within-case analysis and searching for cross-case patterns as a basis for generalizing knowledge claims to the level of hypotheses. The relative scarcity of comprehensive, practical guidance has led to calls for ambitious, IS-centered, and metalevel contributions to theory building methodologies (Chiasson & Davidson, 2005; Grover et al., 2008; Lee, 2001; Orlikowski & Iacono, 2001; Weber, 2003). In response, Kuechler and Vaishnavi developed a framework to support theory building in IS design science research (Kuechler & Vaishnavi, 2012).

Lee and Baskerville (2003) investigate the concept of generalization and present a classification of four types based on distinctions between, on the one hand, empirical versus theoretical statements and, on the other hand, what the researcher is generalizing from and to. Whereas empirical statements refer to data, measurements, observations, or descriptions about real-world phenomena, theoretical statements offer nonobservable but theorized concepts and relationships (Lee & Baskerville, 2003). The four types of generalization (Figure 1) are: from empirical statements to other empirical statements (type EE generalization), from empirical statements to theoretical statements (type ET generalization), from theoretical statements to empirical statements (type TE generalization), and from theoretical statements to other theoretical statements (type TT generalization).

Type EE involves generalizing from one level of empirical statements to another in two different ways. First, there is generalizing data to a measurement, observation, or other description (simply referred to as description below) of the object of study. Second, there is generalizing the resulting description beyond the domain or field setting from which the researcher collected data. In type ET, these descriptions (i.e., empirical statements) are then generalized into theoretical statements. According to Yin, findings from case studies can, for example, be generalized to theoretical propositions (Yin, 2009). However, type ET is limited by the observed field settings in the sense that generalizing from empirical to theoretical statements is context bound (Lee & Baskerville, 2003, p. 236). This perspective is shared, among others, by Klein & Myers (1999) and Walsham (1995).¹

theory, drawing of specific implications, and contribution of rich insight.

¹ Walsham (1995) describes four types of generalization from IS case studies: development of concepts, generation of

| | Generalizing to Empirical Statements | Generalizing to Theoretical Statements |
|--|--|---|
| Generalizing from Empirical Statements | EE Generalizing from Data to Description Generalizing data to a measurement, observation, or other description. | ET Generalizing from Description to Theory Generalizing a measurement, observation, or other description to a theory. |
| Generalizing from Theoretical Statements | TE Generalizing from Theory to Description Generalizing a theory, confirmed in one setting, to descriptions of other settings. | TT Generalizing from Concepts to Theory Generalizing a variable, construct, or other concept to a theory. |

Figure 1. Generalization Framework—Adapted from Lee and Baskerville, 2003, p. 233

Drawing on Jaccard and Jacoby (2010), Rivard (2104) advocates alternating between abstractions and specific instances as a heuristic for developing propositions from data to explain studied phenomena. Type TE involves generalizing from previously built and validated theory to an empirical statement that would be observable if the theory were used in the specific context (Lee & Baskerville, 2003). Being able to claim that a theory is generalizable to a new setting ultimately requires validating it in the new context. This requires comparing what the theory describes or predicts to what is actually observed as happening in the new setting (Lee & Baskerville, 2003). Type TT involves generalizing from concepts to theory—for example, based on a synthesis of ideas from a literature review. Drawing on Bacharach’s definition of theory, such theorizing efforts would ideally result in “a statement of relations among concepts within a set of boundary assumptions and constraints” (Bacharach, 1989, p. 496).

Although the Lee and Baskerville (2003) paper is recognized as a major contribution to the IS literature, it has been criticized by Tsang and Williams (2012), who propose an alternative classification of induction with five types of generalization. In addition to accusing Lee and Baskerville (2003) of self-contradiction in their conceptualization of generalization and criticizing the paper for a too narrow definition of induction, Tsang and Williams (2012) argue that Lee and Baskerville’s definition does not correspond to the common conceptualization by either natural or social science researchers. In a rebuttal, Lee and Baskerville (2012) criticize Tsang

and Williams (2012) for uncritically accepting the tenets of logical positivism and the notion of statistical inference, and they emphasize the value of diverse epistemological perspectives among researchers. In addition, they propose four judgment calls (“uniformity of nature,” “sufficient similarity in relevant conditions,” “successful identification of relevant variables,” and “theory is true”) that need to be made whenever generalizing a theory to a new setting and demonstrate how the process of such generalizing unfolds.

In our own efforts to build theory about politics during process innovation (Müller et al., 2017), we found Lee and Baskerville’s (2003) four types of generalization very useful. However, their framework does not address the process of moving from one type to another, and universally agreed-upon conceptualizations and methodological guidance on the process of generalizing are still missing (Goeken & Börner, 2012). This has led some authors to characterize the treatment of generalization in IS as unsatisfactory (Seddon & Scheepers, 2012). Goeken and Börner (2012) call for methodological frameworks that provide researchers with practical guidance and although Seddon and Scheepers (2012) present a framework for justifying generalizations in IS research, including eight pathways for justifying knowledge claims, practical guidance of a less abstract kind is still needed. Hence, we have developed Lee and Baskerville’s (2003) generalization framework into a practical process for theory building that leverages the power of multiperspective inquiry.

3.2 Pluralism: Between Single and Multiple Perspectives

Pluralist research involves the use of multiple perspectives in theory building, application, and validation. In this paper, we focus on the former. Lewis and Grimes (1999), for example, provide an overview of multiparadigm inquiry and propose metatriangulation as a theory building strategy with paradigms as heuristics. Their strategy enables researchers to juxtapose and link conflicting paradigm insights. By focusing on theoretical triangulation as a strategy of juxtaposing theoretical perspectives to analyze data and evaluate their explanatory power (Denzin, 1978), researchers are able to build theories that capture the complexity and paradoxical nature of organizational life (Lewis & Grimes, 1999). Tashakkori and Teddlie describe this kind of pluralism as an end to the so-called “paradigm wars,” applying perspectives from different philosophies to study particular research problems (Tashakkori & Teddlie, 1998).

Another proponent of pluralism is Tsang, who identifies different perspectives on generalization and describes and compares positivist, interpretivist, and critical realist views on generalizing from case study research (Tsang, 2014). While Scott and Briggs suggest pragmatism as the starting point for a pluralist methodology (Scott & Briggs, 2009), Tsang argues for critical realism as an appropriate basis for theory validation, empirical generalization, and theoretical generalization (Tsang, 2014). Consistent with this line of reasoning, Mingers (2001) advocates a pluralist methodology and rejects the incommensurability argument, i.e., that perspectives bound to conflicting paradigms cannot be mixed in the same empirical account. Against this dogma, Mingers suggest that “paradigms are simply constructs of our thought. To hold that the world must actually conform to one of them is to commit the epistemic fallacy (limiting what may exist to our current knowledge) or, more generally, the anthropic fallacy (defining being or existence only in relation to human being)” (Mingers, 2001, p. 243). Hence, a pluralist methodology is required because

the real world is ontologically stratified and differentiated, consisting of a plurality of structures that generate the events that occur (and do not occur). Different paradigms each focus attention on different aspects of the situation, and so multimethod research is necessary to deal effectively with the full richness of the real world. (Mingers, 2001, p. 243)

Based on this pragmatic and empirically focused approach, Mingers calls for the use of a plurality of

perspectives in research and describes his philosophical position as critical pluralism (Mingers, 1997, 1999, 2001), which also forms the philosophical basis for our framework as advocated in current IS methodology discourse (Bygstad, 2010; Bygstad, Munkvold, & Volkoff, 2016; Dobson, 2001; Mingers, Mutch, & Willcocks, 2013).

Despite the advantages of and support for pluralist research (Galliers, 1993; Landry & Banville, 1992; Lee, 1991; Robey, 1996), Mingers concludes in a literature review that only a small minority of papers in the main IS journals rely on pluralism (Mingers, 2003). One exception is Chiasson et al. (2009), in which the authors argue that pluralist research approaches generate both theoretical and practical knowledge. However, although Mingers and colleagues (Mingers, 1999; Mingers & Brocklesby, 1997) emphasize the desirability and feasibility of pluralist research and Mingers (1997) provides some guidelines, there is lack of knowledge about how to practice it effectively (Mingers, 1999). As a result, we combine our development of Lee and Baskerville's (2003) generalization framework into a practical process for theory building with Mingers's pluralist research strategy (Mingers, 1997, 1999, 2001; Mingers & Brocklesby, 1997), focusing on multiple theoretical perspectives.

4 Proposed Methodology

Relying on theoretical triangulation as described by Denzin (1978), pluralist theory building presupposes access to rich, multidimensional data and draws on the concepts of generalization and pluralism to build new theory (Lee & Baskerville, 2003; Mingers, 2001; Mingers et al., 2013). As such, the methodology leverages multiple theories within and across paradigms to move from data and empirical accounts to theory fragments and statements through four steps of creation and synthesis that iterate between empirical description and theory building as illustrated in Figure 2.

The process of theory building begins (Step 1) with analysis of data using contrasting theoretical perspectives to create multiple, single-perspective empirical accounts. The notion of “perspectives” should be interpreted rather broadly to include paradigms, e.g., functionalism versus interpretivism (Bradshaw-Camball & Murray, 1991; Jasperson et al., 2002); theories, e.g., path dependence versus path creation (Singh et al., 2015); actor perspectives, e.g., Weltanschauung in soft systems methodology (Checkland, 1986; Checkland & Scholes, 1990); and multilevel perspectives, e.g., multilevel trust (i.e., individual, dyadic, team, and interorganizational trust) or multilevel resistance (Lapointe & Rivard, 2005).

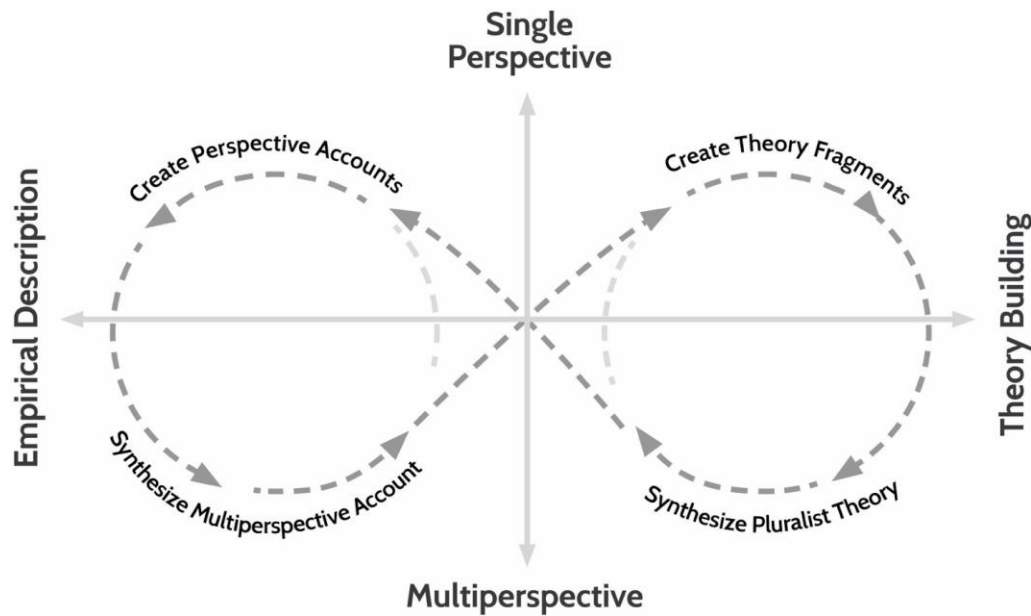


Figure 2. Iterative Steps in Pluralist Theory Building

Also, the idea of creating contrasting empirical accounts necessitates the inclusion of at least two perspectives. The resulting single-perspective accounts are subsequently synthesized into one multiperspective empirical account (Step 2) with a coherent storyline and compelling account. Next, researchers identify and analyze theoretical patterns underlying the multiperspective empirical account and draw on extant theory to create theory fragments (Step 3). Finally, researchers synthesize these fragments into a new pluralist theory (Step 4). Hence, pluralist theory building involves iterating between four steps—create perspective accounts, synthesize multiperspective account, create theory fragments, and synthesize pluralist theory—across two dimensions. One dimension reflects the basic dualism (Lee & Baskerville, 2003) between empirical statements and theoretical statements, whereas the other draws on pluralist thinking to distinguish between single perspective and multiperspective views of the phenomena under investigation. As such, Figure 2 illustrates pluralist theory building as an iterative process with four steps that each involves development of one or more key deliverables. These deliverables serve as output from one step and as input to the next, as summarized in Table 1.

Pluralist theory building begins with the *create perspective account* step, which takes the extant literature and two or more contrasting theoretical perspectives as input to an analysis of empirical data about the phenomena being studied and delivers multiple empirical accounts as output. These accounts feed into the subsequent *synthesize multiperspective account* step, which focuses on establishing a coherent

storyline across contrasting perspectives and yields one or more synthesized accounts (depending on the number of units of analysis). The *create theory fragments* step serves to identify the basic building blocks (e.g., concepts and relationships) of the evolving theory by comparing identified patterns in the data and accounts to extant theory, and it yields theory fragments. The *synthesize pluralist theory* step ties the constituting elements together in a comprehensive theory with boundaries, premises, and propositions. The novelty of the resulting pluralist theory is checked against state-of-the-art knowledge and existing theories.

5 Illustration and Guidelines

To illustrate pluralist theory building and to develop practical guidelines for its application, we revisit the politics study in which we analyzed four business units' responses to company-wide efforts to implement process innovations. Our analyses concluded that different types of organizational politics were the underlying mechanisms that gave rise to the observed events, and our goal was therefore to understand and theorize about these mechanisms. The study followed the iterative process of creation and synthesis across empirical description and theory building as illustrated in Figure 2. First, based on extant theory, we applied Bradshaw-Camball and Murray's (1991) multiperspective framework of organizational politics to create single perspective accounts of political tensions and maneuvering at the case company. This resulted in empirical descriptions (single perspective accounts) of process innovation politics within each of the four business units from each of the applied political perspectives.

Table 1. Deliverables in Pluralist Theory Building

| Step | Deliverable |
|--------------------------------------|---|
| Create Perspective Accounts | Multiple empirical accounts, each based on the same data about the phenomena under investigation but analyzed through different theoretical perspectives, corresponding to Lee & Baskerville's (2003) "TE" type of generalization from theory to description. |
| Synthesize Multi-perspective Account | An empirical account of the phenomena synthesized from multiple, single perspective accounts of the phenomena, corresponding to Lee & Baskerville's (2003) "EE" type of generalization from data to description. |
| Create Theory Fragments | Elements of theory, such as concepts and relationships between concepts about the phenomena, generated from the multiperspective account and extant theory, and corresponding to Lee & Baskerville's (2003) "ET" type of generalization from description to theory. |
| Synthesize Pluralist Theory | A parsimonious theory that combines multiple perspectives on the phenomena based on different theory fragments, corresponding to Lee & Baskerville's (2003) "TT" type of generalization from concepts to theory. |

Second, we synthesized these descriptions into an overall storyline (multiperspective account) for each unit with an explanation of what happened and why. Third, we engaged in "disciplined imagination" (Weick, 1989) to create theory fragments from our synthesized accounts. Specifically, we consistently applied the diverse political perspectives and captured the essence of the synthesized accounts by means of metaphors. We compared the synthesized accounts in terms of similarities and differences, discerning patterns of process innovation politics and considering both the political perspectives of the Bradshaw-Camball and Murray (1991) framework and extant theory. Fourth, we synthesized these fragments of theory into a pluralist theory by alternating between generalizations and specific instances of observed process innovation politics. The results were a model of process innovation politics and nine propositions related to political responses and counterresponses.

Triangulation, peer feedback, and critical self-reflection were central to our theory building efforts. During data analysis, we triangulated between data sources, compared evidence from interviews with meeting notes, plans, and other documents, and checked evidence with key stakeholders. We also triangulated at an aggregate level by systematically comparing summary data presented in tables with written accounts of what happened and why. Furthermore, to validate our findings we concluded the data analyses with key stakeholder reviews in which company employees provided feedback on all write-ups and synthesized storylines. Throughout our theory building process we relied on peer feedback and engaged in critical self-reflection through continuous discussions of empirical findings and theoretical contributions.

In addition to our critical self-reflection, journal reviewers challenged us during consecutive revisions

of our paper to clarify how we moved between description and theory in our research. For example, in the first round of reviews, one reviewer commented: "What is the basis and orientation of the theorizing? Is it from theory to theory, or is it from empirical observations to theory?" This question relates to the types of generalization in which we engaged. In the following subsections, we unfold our process of generalization—moving between empirical description and theory building—by describing each step and the related challenges and activities. These challenges and activities are summarized in Table 2 as guidelines for other researchers that want to apply pluralist theory building. Although we present the challenges and activities in logical order, their sequence may vary based on peer feedback and self-reflection. It is also important to note that the challenges in Table 2 are specific to pluralist theory building and researchers may face other challenges across the four steps that are common to many if not all theorizing efforts based on rich, multidimensional data.

5.1 Create Perspective Accounts

Initially, we adopted a pluralist approach to review relevant literature streams with a political component. These streams included process innovation, software process improvement, IS implementation, and organizational change. The review led to the identification of knowledge gaps on organizational politics and was critical in developing and articulating a research question focused on uncovering political tensions and maneuvering and revealing their impact on process innovation efforts.

The first challenge was deciding on a combination of contrasting theoretical perspectives to drive our ensuing data analysis. We faced the options of either relying on an existing multiperspective framework of

politics (e.g., Lukes's [2005] three dimensions of power or Clegg's [1989] circuits of power) or establishing our own by combining two or more contrasting perspectives that complement each other. In the end, we decided on Bradshaw-Camball and Murray's (1991) multiperspective framework of organizational politics, because it facilitates a comprehensive and holistic understanding of politics based on contrasting perspectives such as the surface and deep structures of organizational politics (Bradshaw-Camball & Murray, 1991). Further, it has been applied both in management (Bradshaw-Camball & Murray, 1991) and IS research (Jasperson et al., 2002).

We subsequently used the framework to analyze process innovation behaviors and outcomes in each business unit. We distinguished between pluralist,² rationalist, interpretive, and radical perspectives on politics as representations of different sociological paradigms (Bradshaw-Camball & Murray, 1991) to analyze our data that had been collected from interviews, observations, meetings, archival documents, and process maturity assessments. We analyzed each business unit from all four contrasting theoretical perspectives to create four single perspective accounts of process innovation politics within each business unit. To develop these distinct political accounts, we went through three stages of data analysis.

First, we developed a case study protocol with a data analysis guide and coding scheme (Table A1 and A2 in the Appendix). We developed the analysis guide based on Bradshaw-Camball and Murray's (1991) framework to identify and classify expressions of politics in the data. The guide contains key questions and concepts for each political perspective that helped us apply the four perspectives to understand how politics had shaped process innovation within each business unit. Whereas the questions reflect our interpretation of how the perspectives apply to process innovation initiatives, the concepts are derived directly from Bradshaw-Camball and Murray's (1991) framework. We also developed a coding scheme based on (Bradshaw-Camball & Murray, 1991), which allowed us to distinguish statements based on who the messenger is (different transformation agents and process users), what the statement is about (intraorganizational level), and what the political nature (perspective) of the statement is (Miles, Huberman, & Saldana, 2014). The analysis guide and coding scheme helped us bring structure to and manage the rich, multidimensional data. Also, the process of identifying key concepts for each perspective during development of the guide (see Table A1 in the

Appendix) helped us understand the differences across perspectives and reach consensus about how to interpret them during data analysis. Hence, by writing down key concepts for the different theoretical perspectives, discussing what they meant to each of us, and developing the coding scheme, we were able to deal with the challenge of understanding the nuances of the underlying concepts and reach consensus about how we would interpret them in our data.

Second, we used the analysis guide and the coding scheme to code the data using ATLAS.ti. Initially, we identified all expressions of politics using the guide and coded each expression in accordance with the coding scheme. Next, we sorted all expressions of politics according to political perspective, evaluated the resulting categorization with respect to internal consistency and homogeneity, and recoded statements as needed. Through this process, we identified nearly 600 expressions of organizational politics ranging from a single sentence to half a page of transcript. We took various steps to ensure both intra- and intercoder reliability (Miles et al., 2014), which correspond to investigator triangulation (Denzin, 1978). In terms of intracoder reliability, we wrote memos on all expressions of politics to document coding rationale and provide preliminary interpretations of political content (Neuman, 2014). We also recoded one transcribed audio recording and compared it to the first coding. In terms of intercoder reliability, two authors brought definitional clarity to the coding scheme by engaging in "check coding" (Miles et al., 2014).

Third, we created single perspective accounts (Table A3 in the Appendix) that describe the process innovation behaviors and outcomes in every business unit from each of the four political perspectives. To facilitate perspective-based accounts of how politics influenced behaviors and outcomes within each business unit, we selected all expressions related to a unit and a political perspective and organized these into 16 tables (four perspectives on four units) (Table A4 in the Appendix). Each table contains illustrative quotations from process innovation participants at different organizational levels. These tables provide an overview that allowed us to engage in data triangulation (Denzin, 1978) by systematically comparing, contrasting, and relating statements from multiple sources (from, e.g., interviews, meetings, and archival documents). We then described the process innovation behaviors and outcomes for each business unit and political perspective, yielding 16 distinct accounts of process innovation politics.

When creating single perspective empirical accounts, we found it challenging to switch between contrasting

² Note: The use of "pluralist" in this context is based on the categorization of sociological paradigms by Burrell and Morgan (1979), and it differs from the concept of "pluralism"

used elsewhere in this paper, which refers to multiperspective, multimethod approaches to conducting research.

theoretical perspectives as we analyzed data and created numerous empirical accounts through perspectives grounded in disparate paradigms. In particular, it was challenging to shift our frame of mind as we adopted different philosophical premises and ways of thinking across nonnative paradigms. To address this challenge, we relied on the data analysis guide with key concepts and questions for each perspective. Although it was not easy to come up with a comprehensive set of useful questions across Bradshaw-Camball & Murray's (1991) rather abstract perspectives, the guide helped prime our brains and change mindset between successive and iterative analyses. Thus, it helped us engage in theoretical triangulation (Denzin, 1978). In addition, we attached a memo to every piece of coded data to sensitize us to contrasting perspectives and different understandings of the data. Finally, we established four tables for all business units—one for each political perspective—containing empirical evidence linking data and perspectives through the questions in the data analysis guide. Such tables are examples of within-case displays “for drawing and verifying *descriptive* conclusions about the phenomena in a bounded context that makes up a single ‘case’” (Miles et al., 2014, p. 90). An example is shown in the Appendix (Table A5). This systematic documentation of our coding rationale and preliminary interpretations enabled us to gradually develop and distinguish numerous empirical accounts based on the rich, multidimensional data, and it helped us reconcile divergent interpretations among researchers and across theoretical perspectives. It also forced us to deal with the challenge of fully understanding the concepts associated with each theoretical perspective.

5.2 Synthesize Multiperspective Account

To establish an overall, coherent storyline, we compared the four single perspective accounts for each business unit and synthesized them into one empirical description of what happened and why in each of the four cases. For that purpose, we relied on our data analysis guide with its emphasis on key concepts and questions for each perspective. In doing so, we moved from single perspective accounts of the data to synthesized multiperspective accounts. A special feature of our study was the fact that we had four embedded cases, which, in turn, resulted in four separate, synthesized accounts.

Initially, the authors collaboratively interpreted four tables with illustrative quotations for one of the business units (one for each theoretical perspective) and synthesized an overall storyline with an explanation of what happened and why. As a participant in the process innovation project, the first author provided context information as a basis for interpreting data and synthesizing the final storyline.

The other authors acted as devil's advocates and contributed to developing a coherent storyline based on consistent use of coded data. The first author then developed similar multiperspective accounts for the remaining business units. The other authors reviewed these independently, leading to changes and additions. We discussed issues until reaching consensus on an interpretation or deciding to revisit the data. This approach is another expression of investigator triangulation (Denzin, 1978). We also made comments and observations about how each of the four political perspectives could help explain behaviors and outcomes. Moreover, we established a table for each business unit highlighting what each single perspective account, and thus each theoretical perspective, helped and did not help explain (Table 7 in the Appendix). These tables document empirical evidence of the links between the single perspective accounts and the synthesized multiperspective account.

Hence, we carefully considered the four contrasting political explanations of the behaviors and outcomes expressed in the single perspective accounts to arrive at a holistic understanding of how organizational politics had shaped process innovation within each business unit. We documented the explanatory power of each political explanation in a table (Table 6 in the Appendix) to support both within-case analysis and cross-case comparisons. Specifically, for each business unit, we evaluated which perspectives offered “minimal,” “some,” “major,” or “dominant” explanations of the observed behaviors and outcomes. The resulting distribution of explanatory power across political perspectives revealed differences across business units and documented that combinations of perspectives were needed to fully account for our findings. These tables (Table 6 and Table 7 in the Appendix) were instrumental in comparing different explanations of observed process innovation behaviors and outcomes within each business unit and determining the combination of perspectives that made for the most compelling account of what happened and why.

It was challenging to compare and synthesize the four perspective accounts for each business unit into their respective multiperspective accounts—each with a coherent storyline across contrasting perspectives—because of the complexity and data richness of the individual perspective accounts. This challenge was exacerbated by differences in vocabularies across the theoretical perspectives. For example, when looking at top management support through different power lenses, the rational view focuses on the transfer of authority, the pluralist and interpretive views focus on power-seeking behavior, and the radical view focuses on opportunities for power gains. The use of the 16 tables (again, four perspectives for each of the four business units) helped us organize the data,

systematically compare statements, and synthesize the single perspective accounts of the observed process innovation behaviors and outcomes into one multiperspective account for each business unit.

Consequently, we needed to adopt and combine vocabularies of individual theoretical perspectives to synthesize the accounts. This required extensive discussions among the researchers during which we moved back and forth between data, single perspective accounts, and the emerging multiperspective accounts. In doing so, we had to bridge the theoretical perspectives by going back to the data analysis guide to better understand the differences and similarities across perspectives and accounts. The analysis guide was helpful because it contains the concepts—and therefore the vocabulary associated with each theoretical perspective and thus perspective account—as well as questions that reflect our interpretation of the political perspectives as they relate to process innovation. During this process, we established and documented the trail of evidence from raw data to the different levels of interpretation. This was time-consuming and challenging and it involved organizing exemplar empirical statements into tables to support our knowledge claims (Table A4 and A5 in the Appendix). However, documenting the trail of evidence was valuable for analyzing the rich, multidimensional data in a systematic and comprehensive manner and for ensuring that the multiperspective accounts accurately reflected the data and the single perspective accounts.

5.3 Create Theory Fragments

During the initial theorizing, we framed and created the basic elements of our theory by identifying and analyzing patterns across the multiperspective accounts and by revisiting the extant literature in search of inspiration. A major challenge during this step was to contrast the synthesized multiperspective accounts while taking the underlying perspective accounts and empirical data into account in order to identify and theorize about patterns of politics across the business units. We started by comparing the four synthesized multiperspective accounts using metaphors as descriptive and heuristic devices. The metaphors helped us abstract and generalize political patterns as a first step toward theory. Hence, we expressed the particular characteristics of politics within each unit by relating the final storyline of each business unit to a metaphor that encapsulates the observed political behaviors and outcomes and highlights its key characteristics (Kendall & Kendall, 1993; Morgan, 1996). The four metaphors we used are: *applying-the-hammer*, *struggling-to-engage*, *walking-the-talk*, and *keeping-up-appearances*. In the words of Kendall and Kendall, “metaphors are like the magical incantations of old. By using words that people

understand and believe in to make linkages with the new and unfamiliar, the speaker provides the ability to envision the world in a new way” (Kendall & Kendall, 1993, p. 149). As such, these metaphors not only express the sequence of political responses and counterresponses during the process innovation project within the business units at an aggregate level, but also represent a new understanding of organizational politics that transcends individual political perspectives and facilitates theorizing about process innovation politics.

One journal reviewer questioned whether the metaphors were linked to and limited by political perspectives. This question prompted us to reflect on the underlying characteristics of and possible mechanisms behind the patterns that we had identified. We responded by arguing that

the metaphors can display variations in degrees of the political perspectives. For example, walking-the-talk may make major or even dominant use of supportive deeper perspectives, either interpretive or radical. However, given the different perspectives on a common overarching goal, it is unlikely that rationalist politics could become more dominant in cases where pluralist politics are already strong (i.e., struggling-to-engage or keeping-up-appearances).

This and other review comments challenged us to revisit the synthesized multiperspective accounts to create theory fragments and develop preliminary propositions regarding process innovation politics. Through this process, we received peer feedback and continued our theorizing through critical self-reflection. As part of the theorizing process, we realized that our metaphors had both strengths and limitations as vehicles for theorizing through cross-case synthesis. Their strengths lie in communicating and abstracting the essence of the synthesized multiperspective accounts to the level of cross-case comparisons (patterns across accounts). However, there is a risk of overinterpreting the cases by attaching too much importance to the metaphors in moving toward theory.

Having described the patterns of process innovation politics in terms of four distinct metaphors, we faced the challenge of identifying theoretical concepts and relationships in the extant literature that could serve as sources of inspiration and as means of stimulating imagination and creativity in creating theory fragments. This process corresponds to Rivard’s theory building practice of alternating “between abstractions and specific instances of the explanation of the phenomenon under study” (Rivard, 2014, p. viii). The new round of literature review was motivated, in part,

by suggestions from the review team to look at the IS development, IS implementation failure, and business process transformation literatures. We repeatedly compared existing theoretical models and concepts in these and other literature streams with the characteristics of the four synthesized multiperspective accounts. Through this process, we drew on previous research and state-of-the-art knowledge to create theory fragments from the empirical descriptions. We found inspiration in Keen's 1981 paper "Information Systems and Organizational Change" and adopted his distinctions between implementation and counterimplementation in IS-related organizational change (Keen, 1981) to identify patterns of responses and counterresponses in process innovation politics across the synthesized multiperspective accounts. We further decided to adopt the vocabulary of process user and transformation agent based on Keen's distinctions between management and users (Keen, 1981). We considered other candidate theories but eventually rejected them. For example, we considered Rahim's conflict management tactics of integrating, obliging, compromising, and dominating (Rahim, 1985, 2002). However, Rahim's theory focuses on how individuals manage conflicts; furthermore, the difference between Rahim's unit of analysis (at the individual level) and our organizational-level investigation of process innovation politics, did not allow for analogical reasoning.

Distinguishing between responses and counterresponses allowed us to reinterpret the metaphors as theory fragments of process-user responses and transformation-agent counterresponses. As such, the identified metaphors constitute exemplars of behavioral patterns in process innovation politics, although other political patterns may unfold under different circumstances. This led to discussions concerning the boundaries of our theory and the contexts under which it is valid. For example, we identified circumstances under which the identified patterns would manifest and expect that other, yet unidentified patterns might manifest under different circumstances. Drawing on Sabherwal and Grover's study of politics in systems development projects, we contemplated the manifestation of several other patterns, e.g., *tug-of-war* and *empire-building* (Sabherwal & Grover, 2009). This comparison of patterns and preliminary theorizing confirmed our assumption that process innovation politics depends on circumstances and context. This realization led us to adopt contingency theory (Iivari, 1992) as an important part of our theorizing and to investigate the contingencies at play.

To identify case-specific contingencies, we listed similarities and differences across the four business units. This allowed us to break simplistic frames (Eisenhardt, 1989) and helped us develop possible

explanations (Miles et al., 2014). Among other things, we compared the units in terms of business domain, process innovation plans, alignment of process needs, and process innovation outcomes (Table A8 in the Appendix). By contrasting similarities and differences across the synthesized multiperspective accounts (i.e., across the business units), we identified goal alignment and goal compliance as important contingencies. In support of this cross-case comparison, we drew on the table highlighting the explanatory power of each political explanation in each of the four cases (Table 6 in the Appendix). The table reveals that the degree to which the perspectives explain the process innovation behaviors and outcomes is contingent upon goal alignment and goal compliance. This pattern helped us synthesize the individual theory fragments into a pluralist theory and develop propositions regarding the contingencies of process innovation politics.

Another theory fragment that we created through the initial process of theorizing was the role of structure in organizational politics. Early in the process, we responded to a journal reviewer's request that we clarify our use of Bradshaw-Camball and Murray's concept of "deep structures." In realizing the significance of structures, we added an appendix that not only identified structures, processes, and outcomes, but also employed the concepts of deep and surface structures to explain two of our propositions. This led to a meaningful dialogue with reviewers and the senior editor. For example, the senior editor noted:

Issues of goal congruence and process alignment characterize the sort of underlying political structure and influence the friction with which different technologies and implementation strategies are likely to work. It isn't clear why you back off of this and fall back on "deep structure." To me this is a core of your findings and analysis and needs more not less forward presence in the discussion.

This, in turn, encouraged us to develop one proposition dealing specifically with the role of structure.

In creating theory fragments, it was challenging to mobilize and leverage the extant IS literature in our theorizing. We compared our empirical findings, i.e., the synthesized multiperspective accounts, to existing theory and drew on concepts and relationships documented in the literature. In doing so, we further defined and narrowed down our area of concern and the literature to which we wanted to contribute. This, in turn, translated into the difficult task of determining the boundaries of our theory. As our case was rich and multidimensional, we had to decide which parts of the IS, management, and organization science literatures to include, even if it meant excluding a literature stream recommended by the review team. We wrestled

with the role of the IS artifact in our research and our literature searches spanned an exhaustive range of general and specific focal areas. In the end, we decided to concentrate on process innovation as a particular form of organizational change that involves a complex interplay between technology and people (Grover & Markus, 2008). Although it was time consuming to arrive at this decision, settling on boundaries and establishing a focus allowed us to identify the appropriate terminology, concepts, and relationships on which to build. As such, our experiences suggest that theorizing should start by clearly defining the area of concern that the research is contributing to and identifying existing theories that need to be considered. These theories should, in turn, be broken down into their constituent components (concepts, relations, and boundaries) to facilitate cross-theory comparisons and comparisons with the empirical accounts that drive the theorizing efforts.

5.4 Synthesize Pluralist Theory

Our synthesizing of theory fragments into a pluralist theory was motivated by two goals. First, we wanted to contribute a pluralist theory as an analytical framework for understanding process innovation politics. Second, we wanted to develop a theory as a practical tool for managing process innovation politics. The resulting model of process innovation politics and the associated propositions describe how process users react politically to process innovation efforts, how transformation agents engage with process users, and the interplay between the two.

In building the theory, we drew on Rivard (2014), Weber (2012), Gregor (2006), Whetten (1989), and Bacharach (1989) to specify the type of theory and define its concepts, relationships, and boundaries. During this process, we developed nine propositions articulating the relationships. Specifically, we drew on the extant literature and the identified structures and response-counterresponse patterns (theory fragments) in relating key concepts to each other and developing the propositions. In effect, we theorized different types of process innovation politics as mechanisms that explain process innovation behaviors and outcomes. As we related key concepts to each other and developed propositions, we constantly revisited the data and synthesized empirical descriptions to explain the observed political behaviors. This process forced us to iteratively reconsider questions about the boundaries of our theory such as “where” the theory applies and to “whom” it applies.

As such, the theory building step (i.e., synthesize pluralist theory) involved an iterative process of abstraction during which propositions were developed for subsequent empirical investigation and comparison. Through several iterative cycles of self-reflection during which we went back and forth

between theoretical statements in the extant literature, empirical descriptions of the cases (the synthesized multiperspective accounts), and our propositions, we were able to achieve analytical stability of the theorized mechanisms (Zachariadis, Scott, & Barrett, 2013). The iterative cycles involved extensive discussion and critical self-reflection among the authors and feedback from journal reviewers that challenged our theoretical statements by asking whether they: (1) explain the empirical cases studied; (2) explain alternative, imagined scenarios; and (3) offer a better explanation than extant theory.

Because our aim was to build a contingency theory, our theorizing efforts focused on articulating contingencies, i.e., the context and circumstances under which the identified political patterns are likely to manifest. The resulting theory describes patterns of process-user responses and transformation-agent counterresponses depending on the degree of goal alignment and level of goal compliance. We articulated the transformation-agent counterresponses as different types of politics that can be utilized when confronted with varying process innovation challenges. We described these transformation-agent counterresponses as reinforcement, persuasion, accommodation, and confrontation politics. They reveal tactics as well as threats and opportunities that can help managers maneuver process innovation efforts. Further, they reflect underlying surface and deep structures of process innovation politics. Finally, we summarized and visualized our theory in a model of process innovation politics (Figure 2 in Müller et al., 2017) and tables of exemplar process-user responses and transformation-agent counterresponses (Table 8 and 9, respectively, in Müller et al., 2017).

In synthesizing the theory fragments into a pluralist theory, we found it challenging to develop a strong (i.e., nontrivial) theoretical contribution. We specifically wrestled with how to establish propositions that were interesting, testable, and bold. In maturing our thinking through consecutive versions of the manuscript, journal reviewers persistently asked us to avoid “truisms” that “offered no new insights” and to go beyond the empirical analyses to make wider knowledge claims—to transcend trivial observations and develop more universally valid theoretical statements. This presented us with the additional challenge of theorizing beyond the immediate case but within the considered context. In good keeping with the tenets of pluralism, the journal editor encouraged us to define “speculative propositions that were true in your observations and that could be tested in other circumstances and, if robust after adequate testing, could be applied in semiformal manner by those who follow.” In the subsequent review of the revised manuscript, the senior editor elaborated by stating that “I am not suggesting that the authors project their findings as if they were universally true, but rather

to suggest if they are universally true, what would the theoretical propositions say?" In doing so, we found it helpful to reevaluate the theory boundaries through self-reflection and to distinguish between premises and propositions.

The premises essentially articulate the boundaries of the theory as the foundation upon which we built our propositions. One premise, for example, posits that process innovation politics is contingent upon goal alignment and goal compliance. We included this statement as a premise and not a proposition because it easily can be inferred from the extant literature. As expected, it was also confirmed by our study. In making the other candidate propositions more assertive, we found it useful to constantly consider the dreaded "so what" question (Whetten, 1989). Among other things, that meant clarifying the managerial implications of the propositions and deciding what to address with our theory in terms of contribution and focus. In the end, the resulting propositions specify criteria for process innovation success and the kinds of political responses and counterresponses that are likely to unfold under different circumstances.

6 Discussion

Based on existing research and grounded in our own experiences (Müller et al., 2017), we have presented *pluralist theory building* as an approach to empirically based theory building. By describing and showcasing this methodology, we address the lack of research that explores the value and feasibility of pluralist research. In comparison with the extant literature, pluralist theory building is unique within the IS field in offering theoretical and practical guidance on how to move from empirical description to theoretical statements through an iterative theory building process of creation and synthesis. As such, it is aligned with Rivard (2014) and advocates the practice of alternating between abstractions and specific instances when developing theoretical statements from empirical data and addresses the identified lack of methodological frameworks and guidance on IS theory building in general (Weber, 2003, 2012) and the generalization process specifically (Goeken & Börner, 2012; Seddon & Scheepers, 2012). While others adopt an abstract perspective and offer little help in terms of how to theorize (Eisenhardt, 1989), pluralist theory building describes the process of creation and synthesis across empirical description and theory building, and it prescribes the iterative steps, deliverables, challenges, and activities (Figure 2, Table 1, and Table 2) involved in the process. In the following, we discuss these contributions to state-of-the-art knowledge on IS research methodologies.

Importantly, we offer a methodological framework with iterative steps (Figure 1) and specific deliverables (Table 1) that builds on and combines the concepts of

generalization (Lee & Baskerville, 2003) and pluralism (Mingers, 1997, 1999, 2001). As described earlier, these concepts are debated in the literature with conflicting views on how they may be leveraged in theory building (e.g., Lee & Baskerville, 2012; Tsang & Williams, 2012). Pluralist theory building draws on both concepts through the iterative movement between, on the one hand, description and theory (i.e., generalization from empirical to theoretical statements as well as between levels of empirical and theoretical statements), and, on the other hand, between single and multiple perspectives (i.e., a plurality of perspectives on the same phenomena). As detailed in the Illustration and Guidelines section and summarized in Table 2, we take a pragmatic stance (Mingers, 2001) in which we are first and foremost concerned with making sense of data rather than with philosophical issues related to conflicting paradigms (Lewis & Grimes, 1999). This pragmatic stance focuses on developing empirical descriptions and theoretical claims (Lee & Baskerville, 2012) rather than on the philosophical discourse about the role and forms of induction in research (Tsang & Williams, 2012). This pragmatic approach bridges the "methodological space that lies between *empiricism* and *interpretivism*" (Zachariadis et al., 2013, p. 856) and it enables us to develop and combine the concepts of generalization and pluralism into practical methodological knowledge that researchers can use to build theory from data.

The ideas behind and design of the methodology, including the pragmatic stance, grew out of our attempts to theorize based on rich, multidimensional data as well as our frustrations over not being able to practice metatriangulation to build new theory (Lewis & Grimes, 1999). Though we owe much in terms of critical self-reflection to the metatriangulation theory building strategy, we found that Lewis and Grimes (1999) offer little advice in terms of how to explore so-called metaconjectures, how to attain a metaparadigm perspective, and how to identify, let alone explore, the transition zones between paradigms in any meaningful manner. Hence, while metatriangulation seeks to reconcile the paradigmatic tensions involved in applying contrasting perspectives on a theoretical level, for example through the notion of transition zones, we found it difficult to practice. This experience led us to develop pluralist theory building, which allows for tensions between multiple and irreconcilable perspectives to be resolved at an empirical level by synthesizing empirical accounts. In other words, instead of trying to solve irreconcilable tensions of an ontological and epistemological nature between theoretical perspectives, we show how to leverage pluralism based on contrasting perspectives to establish coherent empirical accounts and to generalize these into parsimonious theoretical statements.

Table 2. Guidelines for Pluralist Theory Building

| Step | Challenges | Activities |
|---|--|---|
| Create perspective accounts | <ul style="list-style-type: none"> Identifying and selecting theoretical perspectives Understanding concepts underlying theoretical perspectives Switching between contrasting theoretical perspectives | <ul style="list-style-type: none"> Define area of concern Review literature to identify contrasting theoretical perspectives Develop research question Establish case study protocol Collect rich, multidimensional data Develop coding scheme and data analysis guide Code and organize data Assess intra- and intercoder reliability Analyze coded data to develop single perspective accounts Document link between single perspective accounts and theoretical perspectives |
| Synthesize multiperspective account | <ul style="list-style-type: none"> Establishing a coherent storyline across contrasting perspectives Determining combination of perspectives that makes for the most compelling account | <ul style="list-style-type: none"> Compare single perspective accounts using data analysis guide Evaluate explanatory power of single perspective accounts Assess configuration of theoretical perspectives to develop storyline Synthesize storyline in the form of a multiperspective account Document link between single perspective accounts and resulting multiperspective account |
| Create theory fragments | <ul style="list-style-type: none"> Contrasting accounts and data as basis for pattern recognition Identifying comparable theoretical concepts and relationships in the extant literature that stimulate imagination and creativity in theorizing | <ul style="list-style-type: none"> Define boundary of theory Identify and analyze patterns in and across accounts List similarities and differences among accounts Analyze concepts and relationships found in extant theory Compare identified fragments to perspective accounts |
| Synthesize pluralist theory | <ul style="list-style-type: none"> Developing a strong (i.e., nontrivial) theoretical contribution Theorizing beyond the immediate case but within the limits of the context | <ul style="list-style-type: none"> Distinguish between premises and propositions Formulate relationships as propositions Evaluate propositions against extant theory Validate concepts and propositions against data Reevaluate theory boundaries through self-reflection Derive managerial and theoretical implications |
| <i>Note:</i> activities in a step may not always occur in the same order in which they are listed in the table. | | |

Confronted with the problems of applying metatriangulation, we consulted the research methodology literature. First, we decided to rely on Lee and Baskerville's (2003) generalization framework to navigate the complex relationships and dynamics between different forms of theoretical and empirical statements involved in theory building from data. Second, we found inspiration in Mingers (2001) and his vision of a critical pluralist methodology. His ideas and arguments for using multiple theoretical perspectives resonated with us and helped us deal with the problems encountered in trying to practice metatriangulation. Combining these two sources allowed us to successfully develop and publish our process innovation politics paper (Müller et al., 2017), which, in turn, became the foundation for developing

the pluralist theory building methodology. In doing so, we went beyond Lee and Baskerville's (2003) types of generalization and drew on pluralism (Mingers, 1997, 1999, 2001) to turn their descriptive framework into a process with steps, deliverables, challenges, and activities for how researchers can iteratively move from data analysis to theory building (Figure 2, Table 1, and Table 2).

Accordingly, pluralist theory building does not offer a solution to the paradigm incommensurability problem. Instead, we accept that the social world is, drawing from Minger's, "ontologically stratified and differentiated" (Mingers, 2001, p. 243), and that we need an approach based on different paradigms to understand and explain complex empirical events. Whereas Mingers focuses primarily on multiple

methods (Mingers, 2001, 2003; Mingers & Brocklesby, 1997), we focus primarily on multiple theories, which explains why we decided to present our approach as a pluralist theory building methodology rather than a multimethod research design. This fundamental positioning of pluralist theory building allowed us to offer a generic methodology in which certain boundary conditions must be met.

First, the research must involve rich, multidimensional data that allow for contrasting interpretations. This suggests inclusion of qualitative and possibly quantitative data collected through different types of studies, e.g., ethnographies, case studies, action research, or design science. Researchers may use multiple methods, e.g., observation, interviews, and surveys to collect the data, and they may consider a mixed-method approach to data collection. Second, the research must involve at least two contrasting (theoretical) perspectives to support synthesizing perspective accounts and developing pluralist theory. Third, the research goal must be to contribute new theory. In addition to these boundary conditions, it is necessary to adapt the methodology depending on research context. For example, in action research and design science, multiple, contrasting perspectives should be integrated into problem-solving and design activities.

By detailing the iterative steps, deliverables, challenges, and activities in pluralist theory building, we provide guidance to both experienced and novice researchers. Still, based on our own experiences in applying the methodology, it is not easy to build theory in practice. Pluralist theory building demands structure (by following our proposed methodology) as well as creativity and imagination (as emphasized by Weick [1989] and others). As such, our methodology does not offer a process that ensures successful theorizing. Creativity and imagination are indeed indispensable to the process, which accentuates the need for providing researchers with creativity support and encouragement to improve their theory building capabilities. Weick (1989) brings attention to the concepts of “disciplined imagination” and, while our methodology brings

discipline to the process of theory building, it does not ensure requisite imagination in the same way. We therefore invite future research to better understand how complementary imagination capabilities can be supported and encouraged in relation to our methodology.

At this stage of development, pluralist theory building has certain limitations. First, we have developed and exemplified the methodology through an embedded IS case study (Müller et al., 2017). Still, though the IS artifact is central to this case study, it is not part of the methodology, which suggests that pluralist theory building in its current form is a social science research methodology with limited IS specificity. Hence, there is ample opportunity to apply and further develop the methodology related to IS research. Second, we have not tested the methodology based purely on quantitative data. It is conceivable that it can be used based on quantitative data and appropriate statistical techniques (e.g., hierarchical linear modeling) to build theory on multilevel phenomena such as trust or resistance. Other researchers are encouraged to investigate whether such theory building based on quantitative data and techniques is feasible. In its current state of development, we argue that the methodology can be used to theorize based on rich qualitative data possibly in combination with quantitative data.

In conclusion, pluralist theory building combines a critical realist (Bhaskar, 2008) research approach based on Mingers’s pluralist methodology (Mingers, 1997, 2001) with Lee and Baskerville’s perspectives on generalization (Lee & Baskerville, 2003) into a practical methodology for building theory. The methodology involves creation and synthesis based on rich, multidimensional data and theoretical perspectives through four iterative steps with accompanying deliverables, challenges, and activities. As such, it leverages Mingers’s pragmatic approach to pluralism (2001) and extends Lee and Baskerville’s (2003) generalization framework to a detailed process for empirically based theory building.

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Appendix

Appendix Tables A1-A3

In this appendix, we have collected example evidence from our pluralist theory building process behind the referenced process innovation politics paper. We conceal the identity of the four business units and refer to them as Alpha, Beta, Gamma, and Delta.

Table A1 shows our data analysis guide. The guide contains key questions and concepts that helped us apply the four political perspectives to understand how politics had shaped process innovation behaviors and outcomes within each business unit at the case company.

Table A2 provides an overview of our coding scheme. The scheme includes codes that allowed us to identify all political statements, who made the statement in question, which business unit the statement was made in reference to, and the political perspective of the statement. Thus, the coding scheme helped us categorize political statements according to type and sort our data into manageable chunks.

Table A3 contains an example of a single perspective account that describes the process innovation behaviors and outcomes in the Gamma business unit from the rationalist political perspective. All case analyses follow the same structure. The contribution of each actor to the interpretation from the political perspective in question is described in turn. However, for the sake of presentation, the analysis is not only sorted by person (e.g., the CEO and the corporate BPIP manager) but also grouped by organizational level (project level, business unit level, and corporate level). Each analysis is summarized in a “results” subsection.

Table A1. Data Analysis Guide

| Perspective | Questions | Concepts |
|--------------|--|---|
| Pluralist | How are conflicting interests between involved stakeholders expressed and negotiated during the initiative? How do differences in the power base between stakeholders influence the process and its outcomes? | Stakeholders Interests Power bases Conflicts Negotiation |
| Rationalist | How are goals expressed and data collected and used as a basis for evaluating options during the initiative? How are choices between alternative processes and outcomes made based on legitimate and formal authority structures? | Goals Data Authority Value judgments Decision-making |
| Interpretive | How do actors make sense of the initiative based on past experience and symbolic expressions? How do actors use symbols to socially construct the process and influence its outcomes? | Experiences Symbols Sensemaking Social constructions Organizational culture |
| Radical | How are actors influenced during the initiative by the ideologies and constraints of the firm's environment? How does the resulting struggle between opposing forces influence the process and its outcomes? | Ideology Constraints Struggle Oppression Emancipation |

Table A2. Coding Scheme

| Organizational Unit | Interviewee | Perspective |
|---|--|---|
| Corporate | Corporate management Corporate PI* management Corporate PI agent | Interpretive Pluralist Radical Rationalist |
| Alpha ³ | Alpha management Alpha PI management Alpha implementation management | |
| Beta | Beta management Beta PI management Beta PI agent Beta implementation management | |
| Gamma | Gamma management Gamma PI management Gamma PI agent Gamma implementation management | |
| Delta** | Delta management Delta PI management Delta implementation management | |
| <p>*PI is short for process innovation. **No PI agent was appointed for this business unit.</p> | | |

Table A3. Example Single Perspective Account

| Gamma project level |
|--|
| <p>At the project level, the attitude towards the BPIP was positive, and all the project managers offered constructive criticism of various aspects of the BPIP. The new processes were evaluated and implemented, although some project managers required assistance in doing so. From Gamma PM#1's perspective, the introduction of project status meetings was the most apparent change to existing practices coming out of the BPIP. He described this change as a positive initiative. Gamma PM#1 stated: "One of the things that unknowingly has become an excellent practice—and that the BPIP has imposed on us—is holding monthly status meetings, project status meetings {8:6} ... It is a matter of us doing it so often that we can begin to call it a good habit" {8:8}.</p> <p>In the opinion of Gamma PM#2, several of the changes that resulted from the BPIP were valuable. He also pointed to project status meetings as one example. Other examples included improvements to Configuration Management and a new template for project presentations that improved the handover of projects from the sales unit (staff function) to the project organization. Based on his value judgment, he decided to press for the adoption of new processes, e.g., the writing of minutes of meetings, among participants in his project. During the BPIP implementation, he relied on both process maturity assessments and the leadership of the Gamma implementation manager and the Gamma roll-out & training manager. Assessments allowed for snapshots in time that revealed trends in the process implementation over time. He saw these assessments as reliable measures of progress, and he put his trust in them. Since he did not read the new process descriptions, he also put his trust in other sources of information about the new process requirements. Thus, he trusted the Gamma implementation manager and the Gamma roll-out & training manager to provide him with the information that he needed. According to Gamma PM#2: "I mean, I have not ... the only processes I have read are about project management {46:10} ... I guess it was [the Gamma roll-out & training manager] who wielded the baton at the time. [The Gamma implementation manager] has probably been part of it. Anyhow, it was [the Gamma roll-out & training manager] and [the Gamma implementation manager] who held the progress status meetings or whatever they are called" {46:3}.</p> <p>According to Gamma PM#3, many of the new processes were inapplicable and of little value because his project was at a late stage in its life cycle. Many of the activities addressed by the processes had already taken place. However, like Gamma PM#1</p> |

³ No PI agent was appointed for this business unit.

Table A3. Example Single Perspective Account

and Gamma PM#2, he regarded the project status meetings as a positive change. Generally speaking, the implementation was managed like any other project with a timetable, requirements, a plan for meeting these requirements, monitoring to ensure progress, and tests, i.e., in this case, process maturity assessments to evaluate the result. The Gamma roll-out & training manager had interpreted the new processes in terms of process requirements and established a list of things to do to ensure process compliance. The implementation projects were confronted with this list which was updated continually. Elaborations were added based on lessons learned from the assessments and meetings among the project managers. These meetings were held every month in order to discuss implementation-related issues and progress. Specifically, the projects were required to use JIRA (project management tool) and IFS (ERP system) in addition to holding project status meetings. Implementation progress was evaluated through assessments and steps were taken to ensure the accuracy of the results. The Gamma implementation manager coached the implementation-responsible project managers in how to administer the questionnaires used for the assessments. He did not tell them which answers to give but how to interpret and fill out the questionnaires. In the words of Gamma PM#3: “One of the things we did before the last assessment in May ... [the Gamma implementation manager] instructed people from the whole department in how to understand each question—nothing about how we should answer or anything—but when answering, you should be aware that if you have done so and so, you should answer this; ‘do not know,’ if so and so ... so people do not answer arbitrarily” {47:7}.

From Gamma PM#4’s perspective, it was necessary, in addition to the Gamma implementation manager’s coaching, to explain to the project participants how to interpret the survey questions in relation to their project practices. These explanations had a positive effect on the assessment results. Within Gamma, the assessment results and accompanying measurement reports were discussed among the project managers and with the Gamma roll-out & training manager and the Gamma implementation manager to ensure follow-up and to identify the reasons for noncompliance within a given process area. Misinterpretations of the survey questions were also discovered during these discussions. All in all, he described the BPIP implementation in Gamma as appropriate, although the short duration of the pilot and its overlap with the broader implementation resulted in the new processes not being evaluated and modified before wider dissemination. The implementation pace was hurried and some processes, e.g., within the process area of Measurement and Analysis, were still on the drawing board at the time when they were supposed to be put into practice. Yet, Gamma PM#4 found it reasonable to define and implement the new processes concurrently. In his capacity as project manager, he analyzed the gaps between existing practices, including plans and other forms of documentation, and the new processes. It was determined that only a few changes were needed, estimated at a few hundred man-hours. Status meetings during the implementation ensured continuous evaluation and progress. Gamma PM#4 stated: “I evaluated my project. The first step was an evaluation according to the new processes: Where did I see changes in my project being necessary in order for me to meet the requirements. I saw that I needed to update my management plan; I need to make a data management plan ... I suggested that I needed this, this, and this in the project. Then it was planned that in the first period from this date to that date, we work on these process areas ... It was [the Gamma roll-out & training manager] and [the Gamma implementation manager] who had already planned such an implementation sequence to keep us on track ... then follow-up meetings were held [to determine the outcome]: How did it go? Have you updated the management plan? Have you made the configuration management plan? ... It was a sensible approach” {48:2}.

Gamma unit level

In the opinion of the Gamma senior VP, getting to CMMI Level 2 was “fundamental.” The diversity of the projects, i.e., what he termed a “diverse business model,” made it necessary to focus on processes to ensure common ground within the business unit. Despite his commitment to the goal of the BPIP, he expressed doubts about the overall maturity of Gamma. In his opinion, Gamma had not reached Level 2 yet. By distinguishing between the process maturity of different Gamma departments, he demonstrated a detailed understanding of the status quo. One reason for the variation in process maturity was the relocation of one implementation project from Gamma to Beta due to organizational restructuring. This project was the original implementation flagship of the BPIP and with it disappeared the process knowledge and process-oriented people. It left Gamma Ground Solutions without any process champions to drive the BPIP implementation forward. The other departments had the benefit of the leadership and process push of the Gamma roll-out & training manager and the Gamma implementation manager. The Gamma implementation manager was characterized as dedicated to seeing the BPIP through. According to the Gamma senior VP: “You can say that [the Gamma implementation manager] is extremely biased in this matter. This is his life’s blood, right {16:5} ... There is no doubt that our process knowledge in the [Gamma Ground Solutions] organization is insufficient. And this means that their ability to help themselves and move on is less than it is here where [the Gamma implementation manager] and [the Gamma roll-out & training manager] can push things. It is undoubtedly a big difference. It is harder for them to move ahead” {16:8}.

According to the Gamma roll-out & training manager, not all the new processes were in place and fully defined, e.g., they were not yet available in the TMS when BPIP Phase 2 began. As a consequence, the implementation-responsible project managers took the initiative to study the CMMI Level 2 requirements themselves. Each project manager was then asked to update existing plans, etc., to ensure compliance. Despite their initiative, the project managers were confronted by their own uncertainty about the interpretation of the CMMI requirements. Therefore, the Gamma roll-out & training manager and the Gamma implementation manager found it necessary to go through it thoroughly with them and explicate what they needed to do to comply with CMMI Level 2. Weaknesses in existing practices were identified, which led to project-specific recommendations. In addition, measurements and project status meetings were made mandatory. All in all, the new processes were interpreted, but were put into practice largely unmodified. Also, only minor adjustments were made to existing practices because Gamma

Table A3. Example Single Perspective Account

was a relatively mature organization to begin with and close to the desired end state. Project Monitoring and Control was the process area impacted the most, with a clear benefit to project follow-up in Gamma. Speaking of project follow-up, three different types of meetings—department meetings, implementation meetings, and project status meetings—served as communication forums that ensured focus on the BPIP within the organization. Implementation meetings were held twice a month with the project managers. Issues were discussed, positive experiences were shared, and status reports were written based on the minutes from these meetings. Department meetings and project status meetings were held to facilitate communication both across and within projects and were well-received. Consequently, even though some people felt that the BPIP had been forced upon them, and although authority had to be exerted, the same people came to appreciate the value of the new processes. As the Gamma roll-out & training manager expressed: “I guess they feel it has been forced down their throat. I think if you actually asked them, they would say: ‘Yes, we have been forced into doing it. Somebody in Gamma decided we should have it in Gamma, and then we had to do whatever they wanted to do’ ... I believe that along the way—while they were being, you might say, coerced—they were able to see that, well, this is actually quite sensible” {24:6}.

From the Gamma implementation manager’s perspective, only Gamma Ground Solutions had a need for a CMMI certificate. At the same time, it was, paradoxically, the least mature part of the organization. Nevertheless, he described Gamma as committed to the BPIP and willing to cooperate with corporate services to see the project through. However, in terms of the actual process implementation, he identified two main obstacles. One was insufficient training in the use of the new processes. The other was a lack of implementation-related communication between the two Gamma locations. Training and communication were means to convince people of the value of the new processes and were therefore important for the success of the BPIP. Because both were lacking, Gamma senior management had to exert authority to ensure implementation progress. As the Gamma implementation manager stated: “Preferably, people are able to see the point in continuing the process {27:9} ... Anyway, I know from Gamma that local management applies massive pressure to ensure that [the BPIP] succeeds ... everybody understands that the [BPIP] items put on the agenda by the CEO at the strategy seminar are important. And then people say it is important because it is not beneficial to your career to say something different” {1:13}.

Corporate level

In the opinion of the corporate BPIP manager, Gamma was committed to the BPIP, although their support for the project varied over time. For example, at times they expressed their need for a CMMI certificate in no uncertain terms. At other times, the rhetoric was softened. At yet other times, the Gamma senior VP was concerned with value chain analyses as the basis for process improvements and not the CMMI. The overall goal was, however, not challenged. In fact, the CMMI and its emphasis on planning and documentation fit the Gamma business strategy with its focus on large projects. Despite their commitment to the BPIP, Gamma focused on CMMI compliance rather than TMS process adherence. Whether or not a certain template was being used was of little consequence as long as the process in question was implemented one way or another. The implementation progressed satisfactorily. The implementation began later than expected, but Gamma was the first business unit to start putting the new processes into practice. Constant meetings and discussions about the BPIP preceded the actual implementation. The corporate BPIP manager was satisfied with the implementation progress and the level of activity, although only minor changes were made to existing practices. Gamma’s implementation plan was based on the premise that the business unit was already operating close to CMMI Level 2. It was just a matter of adding activities to Project Monitoring and Control and establishing a few extra plans. The impact of the BPIP was as high as could be expected. The BPIP was taken seriously, and the implementation was managed “quite sensibly.” Their diligence was reflected in their request for being assessed ahead of time in order to better determine the gaps between the new processes and existing practices. Subsequent process maturity assessments were used as a driver in Gamma’s improvement efforts. First, the assessment results attracted the attention of the Gamma senior VP because they were on the agenda at the quarterly operational review meetings attended by the CEO. Unsatisfactory results made the Gamma senior VP increase the pressure for better process performance on the Gamma implementation manager and the Gamma roll-out & training manager who in turn increased their pressure on the project managers. Second, the assessments were—like the project status meetings that had been introduced—a vehicle for communication and learning. The assessment results were analyzed and corrective actions were initiated to address identified shortcomings. For example, the project status meetings were introduced because a lack of internal project communication had been identified as a problem through the assessments. According to the corporate BPIP manager: “The only reason [the Gamma senior VP] is angry about not being in the green this time is that it came up during his operational review, and he knows we are interested in it. And when he is angry, [the Gamma roll-out & training manager] and [the Gamma implementation manager] keep a tight rein on [Gamma PM#3] to make sure he does his things {28:10} ... I have spoken quite a bit with [the Gamma roll-out & training manager] because a lot of the things in Gamma seemed to have to do with the lack of communication ... I believe they have done something about it because [now] they have these weekly meetings with the project managers who have run this [implementation]” {1:7}.

According to corporate SPI agent #2, the BPIP implementation in Gamma was a success, and she attributed it to Gamma management commitment and attention. Corporate SPI agent #2 stated: “It was as if it was up to the business units to decide if they wanted to participate [in the BPIP] or if they did not want to be part of it, and the extent to which they wanted training and what not. This impacts the way it is implemented within each business unit. That much is evident in Gamma. It is fairly well-implemented there, and that is a great example. It is also because there has been [management] attention over there, right” {31:5}.

Table A3. Example Single Perspective Account

| Results |
|---|
| <p>At the project level, individual value judgments led project managers to identify positive effects of the BPIP—for example, the impact of regular project status meetings on project progress and outcomes. Having said that, most if not all project managers found that only few changes or minor adjustments to existing practices had taken place as a result of the BPIP. One project manager cited the relatively high maturity at the outset as an explanation for the few changes at the project level. The corporate BPIP manager confirmed this interpretation as did the results of the baseline assessments. In the Gamma senior VP's judgment, the process maturity varied across Gamma departments. He attributed the lack of progress in particularly one department to a lack of people like the Gamma implementation manager and the Gamma roll-out & training manager. By implication, he credited them with the success in other parts of the organization. For his part, the Gamma implementation manager stated that the decision to commit resources to the BPIP was based on a judgment of the value it would contribute to Gamma and that authority was subsequently exerted to ensure the project's success. For her part, the Gamma roll-out & training manager stressed that the processes were too incomplete to ensure implementation success based on the data available at the beginning of the implementation stage of the BPIP. Therefore, it was decided that the implementation-responsible project managers needed guidance. Consequently, the Gamma implementation manager and the Gamma roll-out & training manager assessed the gap between the new processes and existing practices to identify implementation requirements and needs for guidance in each project. Implementation plans were developed for the benefit of the project managers, including recommendations for what was needed for CMMI compliance. Project Monitoring and Control was one process area targeted for improvement across all projects. Furthermore, it was determined to organize BPIP status meetings within Gamma on a regular basis. These meetings were mandatory for all project managers as part of the overall implementation strategy within Gamma. More generally, Gamma management decided on organizing careful follow-up on implementation progress to ensure that goals were reached. As a consequence, the BPIP was put on the agenda of three types of meetings, namely implementation, department, and project meetings within Gamma. These meetings served to ensure communication both across and within projects and they were considered an important management vehicle for creating and sharing knowledge about implementation progress in Gamma. There was also close follow-up on and joint discussions of the reports from the corporate-led maturity assessments that were conducted several times during the implementation phase of the BPIP. Thus, assessments helped drive the implementation effort in the sense that assessment results attracted management attention and resulted in an organization-wide pressure for change. On account of these efforts, the corporate BPIP manager described Gamma as a proactive organization that was attuned to process innovation and had managed to achieve CMMI Level 2 compliance. Because it was a fairly well-run organization to begin with, conditions for successful implementation were present. He described Gamma as proactive because they requested unscheduled assessments and because their implementation plan was ambitious (in terms of the number of projects that were allocated). The corporate BPIP manager attributed the Gamma success to a shared perception of the value of and need for the CMMI. In summary, at the outset, the level of process maturity in Gamma was relatively high compared to the rest of the company. The department was already process oriented and they had previously taken steps to improve work practices. When the BPIP was initiated, they quickly identified the gaps and implemented needed changes to become CMMI Level 2 compliant. Through close monitoring and follow-up by the Gamma implementation manager and the Gamma roll-out & training manager at both the project and department level, Gamma was able to meet the BPIP goals. The Gamma project organization was comprised of people who were committed to ensuring the successful implementation of new processes. In particular, there was an alignment of interests and a shared understanding of the "whys" and "hows" of the project between the local project sponsor and champions, i.e., the Gamma senior VP, the Gamma implementation manager, and the Gamma roll-out & training manager. Dedication and attention to detail were expressions of support from a committed project management team that facilitated successful implementation through communication and careful follow-up. Gamma's success was also attributable to the project managers who were aware of the shortcomings as well as the opportunities offered by the new processes, knew what had to be done to resolve issues, held joint status meetings on a regular basis, were loyal to senior management, and rationally executed the implementation strategy according to plan.</p> |

Appendix Tables A4-A8

Table A4 contains data coded as expressions of rationalist politics in the Alpha business unit. We selected all expressions related to a unit and a political perspective and organized these into 16 tables (four perspectives on four units).

Table A5 contains sample evidence of interpretive politics in Alpha. We created similar tables for each business unit—one for each political perspective—containing empirical evidence linking data and perspectives through the questions in the data analysis guide. Consequently, these tables contain answers to the questions (in the data analysis guide) that we used in interrogating the data.

Table A7 highlights what each of the four political perspectives helps and does not help explain in terms of process innovation behaviors and outcomes in the Alpha business unit.

Table A8 contains a comparison of four business units at the case company in terms of key factors describing and explaining the process innovation behaviors and outcomes.

Table A4. Example of Data on Pluralist Politics in Alpha

| Alpha project level | Alpha unit level | Corporate level |
|--|--|---|
| <p>Alpha PM#1*</p> <ul style="list-style-type: none"> Implementation easier in production vs. development projects {6:1} Implementation immense → BPIP not prioritized {6:3} Lack of IT support {6:4} No sparring partners → lessons learned not incorporated {6:6} Generic templates unsuitable {6:7} One-man army, sidetracked {6:8} Lack of guidance {6:12} <p>Alpha PM#2</p> <ul style="list-style-type: none"> Processes unsuitable for production {10:1} Cookbook ↔ negotiation of interests → delays {10:5} Heterogeneity → generic templates not applicable {10:7} No production template {10:10} Lack of time → frustration {10:11}, {10:17} BPIP = corporate dictate {10:13} No value → annoyance {10:14} Implementation forced through {10:18} Message not conveyed, management dictate → dirty work by project managers {10:20} <p>Alpha PM#3</p> <ul style="list-style-type: none"> Generic processes and Alpha approach sensible {23:2} Cookbook adaptations to blueprint possible {23:4} Young vs. old project manager conflict {23:7} Standardization inhibits creativity {23:8} Old technicians opposed {23:11} Procurement falls short {23:20}, {23:21} | <p>Alpha senior VP</p> <ul style="list-style-type: none"> Funding conflict {45:8}, {45:11} Expediter (project manager type) need retraining {45:10} Funding unresolved → scope change {45:14} Process misalignment: Alpha vs. special programs {45:16} Corporate demand used as forcible means {45:17} <p>Alpha implementation manager</p> <ul style="list-style-type: none"> No push from middle management vs. self-interest of PM#1 and PM#2 {17:11} Alpha senior VP as driver and enforcer {17:12} Pull by implementation-responsible persons not project owner {17:13} Contradiction: standardization vs. BU differences {17:19} | <p>Corporate BPIP manager</p> <ul style="list-style-type: none"> Layoffs + organizational changes → BPIP standstill {5:5} PM#3 + Alpha senior VP as supporters vs. all others {29:20} Lack of creativity → PM#2 removal {36:12} |
| *PM is short for project manager. | | |

Table A5. Sample Evidence of Interpretive Politics in Alpha

| Perspective | Concepts | Illustrative quotations | Observed interactions |
|--------------|---|---|---|
| Interpretive | <ul style="list-style-type: none"> ▪ Sensemaking ▪ Symbols ▪ Social constructions ▪ Organizational culture ▪ Experiences | <ul style="list-style-type: none"> ▪ “Our project managers have come to realize that the PI project gave them some tools that were actually useful” (Alpha implementation manager). ▪ “Speaking of the cookbook—at one point in time, we realized that we needed to understand all this, and then we established a CMMI guideline for the projects to use. We wrote down what it is all about” (Alpha implementation manager). ▪ “I see it as a leap forward that each development process has been thoroughly defined ... it commands greater respect” (Alpha project manager #1). ▪ “My fear is that having this cookbook will stop people from asking: ‘What does all this mean to me?’ and make them follow it blindly ... my belief is that, in Alpha, they don’t have the maturity to reflect upon processes” (corporate PI manager). | <ul style="list-style-type: none"> ▪ <i>Sensemaking</i> activities among Alpha managers led them to see the PI project as a solution to the crisis situation in Alpha ▪ The Alpha senior VP became a <i>symbol</i> of decisive action ▪ As part of <i>social construction</i>, Alpha managers continuously communicated the PI project as a <i>symbol</i> of the unit’s future directions ▪ Alpha management decided to adapt the generic processes to Alpha’s <i>organizational culture</i> based on past <i>experiences</i> with project managers’ inability to adopt off-the-shelf processes |

Table A6. Explanatory Power of Political Perspectives

| | Political metaphor | Pluralist politics | Rationalist politics | Interpretive politics | Radical politics |
|--------------|------------------------|--------------------|----------------------|-----------------------|------------------|
| Alpha | Applying the hammer | Minimal | Major | Dominant | Minimal |
| Beta | Struggling to engage | Dominant | Some | Some | Minimal |
| Gamma | Walking the talk | Minimal | Dominant | Some | Some |
| Delta | Keeping up appearances | Major | Minimal | Dominant | Minimal |

Table A7. Four Perspectives on Process Innovation Behaviors and Outcomes in Alpha

| Political perspective | Helps explain | Does not help explain |
|------------------------------|---|---|
| The pluralist perspective | <ul style="list-style-type: none"> ▪ The implementation speed | <ul style="list-style-type: none"> ▪ The latency of conflicts ▪ The implementation approach |
| The rationalist perspective | <ul style="list-style-type: none"> ▪ The support for the BPIP ▪ The implementation approach ▪ The implementation process ▪ The implementation outcome | <ul style="list-style-type: none"> ▪ The latent conflicts |
| The interpretive perspective | <ul style="list-style-type: none"> ▪ The alignment of interests | <ul style="list-style-type: none"> ▪ The implementation process ▪ The lack of support for competing perceptions of the BPIP |
| The radical perspective | <ul style="list-style-type: none"> ▪ The support for the CMMI | <ul style="list-style-type: none"> ▪ The tailoring of processes |

Table A8. Four Cases of Process Innovation at the Case Company

| | Alpha | Beta | Gamma | Delta |
|-----------------------------|---|--|---|--|
| Business domain | Aerostructures for commercial and military customers | Aerospace technology for military customers | Integrated systems for military customers | Radar systems for civilian customers |
| BPT plan | Process tailoring through guidelines, checklists, and templates | Generic implementation plan | Generic implementation plan | Management-driven tailoring to suit business unit needs |
| Software development | Limited | Major | Major | Limited |
| Goal alignment | A priori low | A priori high | A priori high | A priori low |
| BPT outcomes | Process maturity increased; not CMMI Level 2 compliant; met BPT goals | Process maturity decreased; not CMMI Level 2 compliant; did not meet BPT goals | Process maturity increased; CMMI Level 2 compliant; met BPT goals | Process maturity decreased; CMMI Level 2 compliant; did not meet BPT goals |

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