Investigating the Challenges of Capability Development: An Integrative Review and Exploration of Strategic Initiatives

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Investigating the Challenges of Capability Development: An Integrative Review and Exploration of Strategic Initiatives

A Dissertation Presented

By

ERIM ERGENE

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of the requirements for the degree of

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Management

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DEDICATION

To Seray, who put us on our wonderful path.

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Completing a dissertation requires significant effort and dedication. However, without the support of others, such work would not be possible. My first thanks must go to Steven Floyd. Since 2013, he has been my advisor, mentor, champion, and friend. I am privileged to have learned from him the way to do research and to conduct one's self within the confines of classrooms, our departments and our field. One of the luckiest days of my life will remain to be October 3rd, 2013 when he accepted to be my advisor.

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ABSTRACT

INVESTIGATING THE CHALLENGES OF CAPABILITY DEVELOPMENT: AN INTEGRATIVE REVIEW AND EXPLORATION OF STRATEGIC INITIATIVES

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This three-paper dissertation focuses on strategic initiatives, the teams that undertake such endeavors, and the team processes that are utilized. A strategic initiative is a temporary undertaking intended to develop or renew organizational capabilities; as such, initiatives are crucial for organizational performance and competitive advantage. In organizations, examples of strategic initiatives include projects for new products, services, and operations, as well as corporate new ventures. Despite their importance for organizational survival, the importance of strategic initiatives is not always acknowledged in academic research. This dissertation starts from the assumption that strategic initiatives, as the vehicles by which organizations develop the capabilities that implement their strategy, need to be considered an important element of strategy process that requires in-depth examination to ensure their successful development.

In order to bring attention to strategic initiatives and contribute to a growing body of literature, this dissertation undertakes three distinct but related papers concerning these important projects. I first review and integrate the literature relating to strategic initiatives, which is highly dispersed around different streams of research, and provide a holistic look into the past, present and future of research concerning strategic initiatives. I then explore strategic initiatives and the teams that undertake them in two separate papers; first, by situating the initiative within the larger organizational context through a discussion of goal heterogeneity at multiple levels, and second, by investigating the temporal dynamics between strategic initiative task characteristics and intrateam personal processes. Overall, this research provides an organizing framework to a dispersed literature and attempts to answer just two of the many research opportunities that are charted for future exploration, in a topic that is fundamentally vital for organizational survival.

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CHAPTER 1

INTRODUCTION TO THE DISSERTATION

In 2007, Nag, Hambrick, and Chen set out to find what strategic management was all about. They undertook a survey of scholars submitting papers to the Business Policy and Strategy division (now Strategy division) at the Academy of Management and asked them to identify strategy articles among a random set of abstracts. A textual analysis of the respondent feedback garnered an implicit and consensual definition of strategic management; this is a field that deals with "major intended and emergent initiatives taken by general managers on behalf of owners, involving utilization of resources, to enhance the performance of firms in their external environments" (Nag, Hambrick, & Chen, 2007, p. 944). This definition identifies strategic management as a field that studies actions managers take to alter the resources of their firms in order to benefit owners by improving the performance of their firms in their respective industries. The setting in which these actions take place are the *strategic initiatives* that can arise out of intended and unintended sources.

Strategic initiatives can be defined as temporary group undertakings intending to add or renew capabilities within an organization (Lechner & Floyd, 2012; Lechner & Kreutzer, 2010a). Strategic initiatives take on many forms, including projects for new product development and process improvement, proposals for capital investment, growth programs, and corporate new ventures. These projects act as the medium in which organizational renewal occurs, and given the fact that capabilities play a central part in major strategic management theories (Barney, 1991; Eisenhardt & Martin, 2000; Grant, 1996; Nelson & Winter, 1982; Wilden, Devinney, & Dowling, 2016), they are vital to

organizational performance and survival. Whether deliberate or emergent (Mintzberg & Waters, 1985), autonomous or top-down (Burgelman, 1983a), exploratory or exploitative (March, 1991), strategic initiatives form a basis for strategy formation in an organization (Lovas & Ghoshal, 2000; Noda & Bower, 1996) providing an interface through which organizations alter their capabilities (Floyd & Wooldridge, 2000; Leonard-Barton, 1992).

Despite their importance and, implicit, central role in the field, it is surprising that strategic initiatives do not have a more significant role in management research. Even though practitioners recognize them as an essential part of the strategy process (e.g. Atsmon & Smit, 2015; Isern & Pung, 2007), strategic initiatives are not always recognized in theoretical and empirical research. For example, when top management characteristics affect organizational actions (Finkelstein, Hambrick, & Cannella, 2009), they do so by influencing the variety of strategic initiatives undertaken by the firm. When a firm attempts to mimic others in their institutional field (Scott, 2008), they do so by adopting strategic initiatives undertaken by their counterparts across the field. However, this importance is not always acknowledged in academic research even though practitioner-oriented publications showcase their central role in strategy formation. In fact, approximately 30% of all articles initially identified in Chapter 2 come from practitioner-oriented journals (HBR and CMR) even though they represent only 2 of the 15 journal titles explored.

There are theoretical and methodological reasons for the omission of strategic initiatives in empirical research, some reminiscent of the problems encountered by research on implementation, including an unwillingness or inability to open the `black box` representing the messy, complex social forces comprising the phenomena

(Mintzberg, Ahlstrand, & Lampel, 2005). However, I argue that there needs to be more of an explicit recognition of strategic initiatives. Strategic initiatives are an important unit of analysis (Burgelman, 1991; Canales, 2015; Lechner & Kreutzer, 2010a) that requires scholars to pay attention to the factors that impact their content and developmental process. As such, this dissertation focuses on these vital projects and the relationships among and between people undertaking them within the larger organizational context. More specifically I undertake a three-paper dissertation, each paper being centered around a question that focuses on topics that have high relevancy to strategic initiatives and their context. These three papers are presented in three sequential chapters and are written to be independent stand-alone articles; in other words, each chapter individually lays out their specific research question, contributions, theoretical models and conclusions, and they can be read in any given order, independent of their placement in this document. Below I present a short overview of these three papers.

In Chapter 2, I examine the extant research regarding strategic initiatives. As I began my introduction, I mentioned the central role strategic initiative plays in strategic management at large (Nag et al., 2007). Although strategic initiatives have always been a part of the strategic management discussion (e.g. Burgelman, 1983a; Mintzberg & Waters, 1985; Takeuchi & Nonaka, 1986), there is a burgeoning stream of research that is utilizes strategic initiatives as a unit of analysis in strategy domain (e.g. Anand, Mulotte, & Ren, 2016; Huang & Jong, 2018; Klingebiel & De Meyer, 2013; Kreutzer, Walter, & Cardinal, 2015; Lechner & Floyd, 2012; Parker, Krause, & Covin, 2017; Shi, Connelly, & Cirik, 2018; Walter, Lechner, & Kellermanns, 2016). However, this body of work is somewhat fragmented across a variety of perspectives and a consolidation is needed. This

review looks at the strategic initiative as a theoretical and practical context operating at a higher level of analysis and attempts to provide an overview without necessarily focusing on specific lower level characteristics, such as focusing *just* on a specific type such as new product development initiatives. In other words, I take a general view of what a strategic initiative is and, review the literature from a broader perspective. Given the growing interests, and lack of a recent review except for a helpful but limited effort by Lechner and Kreutzer (2010a), an integrative look is timely and needed.

This paper provides a comprehensive and methodological review of the literature surrounding strategic initiatives across a wide number of outlets including academic and practitioner-oriented outlets. Based on the influential intraorganizational ecology model (Burgelman, 1991), I identify multilevel factors (i.e. individual, team, organization, and environment) operating at each stage of the framework (i.e. variation, selection, and retention). Building on this frame, I then provide several avenues for future investigations. Overall, this paper contributes to the literature by organizing a framework that synthesizes our knowledge-base and offering future research directions.

In Chapter 3, I ask the question what is the impact of goal heterogeneity on strategic initiative team processes and outcomes? Strategic initiative teams are likely to experience unique dynamics due to goal heterogeneity as there are multiple levels of goals to contend within the team at the individual, departmental, organizational and the initiative level. These, potentially conflicting, nested goals impact both variation in strategic initiative formation as well as factors within the selection environment. Literature, however, has not investigated these multilevel goals from a holistic perspective; when initiative teams are examined they are either taken as a unitary whole,

assuming shared priorities and goals (e.g. Lechner & Floyd, 2012; McGrath, 2001; Walter et al., 2016), or discussed with a perspective that reduces heterogeneity within the team to demographic proxies (e.g. Ancona & Caldwell, 1992; Keller, 2001; Lovelace, Shapiro, & Weingart, 2001). In a broader sense, goal heterogeneity is one of the major assumptions of the behavioral theory of the firm (Cyert & March, 1963), but it remains an underdeveloped area within the literature (Argote & Greve, 2007; Gavetti, Greve, Levinthal, & Ocasio, 2012).

In order to address these shortcomings in the literature, this paper takes an integrative perspective and first identifies different configurations of goal heterogeneity that could be experienced within a strategic initiative team. Utilizing these configurations, I then examine how strategic initiative team processes, building on the arguments by Marks, Mathieu, and Zaccaro (2001), can address goal heterogeneity to ensure high levels of initiative performance over time. Finally, I investigate the interaction between performance and goal heterogeneity in strategic initiative teams over the period of their temporal development within the resource allocation process (Burgelman, 1991). Overall, the main contribution of this paper is to investigate multilevel goal heterogeneity in strategic initiatives and identify how teams can best manage this heterogeneity for performance. In doing so, this paper contributes to the literature on strategic initiatives and strategy formation as well the literature on cross-functional teams (e.g. Ancona & Caldwell, 1992; De Clercq, Castañer, & Belausteguigoitia, 2011; Hitt, Nixon, Hoskisson, & Kochhar, 1999).

Finally, in Chapter 4, I ask the question what is the relationship between task complexity and task conflict in strategic initiative teams? While task context of strategic

initiatives have received interest, previous examinations mostly remained at the dimensions of exploration and exploitation (e.g. Florén & Frishammar, 2012; Lechner & Floyd, 2012; Sykes, 1986; Walter et al., 2016). This paper provides an improved understanding of the strategic initiative task; a context that is largely assumed to be complex as strategic initiatives undertake novel and uncertain tasks. Similarly, literature surrounding teams largely assumed complexity of the team task as an independent property of the task itself based on certain characteristics (Campbell, 1988; Wood, 1986). However, recent theoretical arguments (Hærem, Pentland, & Miller, 2015) suggest that complexity is an inseparable part of the task, which cannot necessarily be defined as independent of the context itself. Building on this view, I consider how time and the task context interacts to impact the complexity of strategic initiative tasks. This time-dynamic perspective provides a view that suggests complexity is not necessarily independent, but rather changes – and specifically, decreases – as the initiative gets developed.

Building on this argument, I then show the implications of such a dynamic perspective by considering intrateam conflict. The literature on team conflict is extensive, but the results have been inconclusive requiring a fine-grained look into the moderating factors of task conflict-performance relationship (Bradley, Anderson, Baur, & Klotz, 2015; de Wit, Jehn, & Scheepers, 2013; Loughry & Amason, 2014). This paper unpacks the temporal effect of task conflict on initiative team performance, stemming from changes in task complexity, adding to the calls for temporal theorizing in team (Kozlowski & Bell, 2013) and management research, in general (Ancona, Okhuysen, & Perlow, 2001; Mitchell & James, 2001). Thus, while questioning a central assumption

regarding task complexity in strategic initiative teams, I also contribute to a long-standing debate in the intra-team conflict literature regarding conflict-performance relationships.

Overall, through these three papers, I contribute to strategic management literature at large by bringing strategic initiatives to the forefront of literature on strategy formation and strategic decision-making and add to a growing body of work. Strategic initiatives lie at the core of what strategic management is all about but recent statistics suggest that they fail at a very high rate; according to scholars and practitioners, up to 70% of strategic initiatives are considered to be failures by their organizations (e.g. CGMA, 2016; Walter et al., 2016). With this dissertation, I hope to shed light on forces that shape their most perilous developmental journey.

CHAPTER 2

STRATEGIC INITIATIVES: A REVIEW AND FUTURE DIRECTIONS

Nag and colleagues (2007) define the field of strategic management as being focused on strategic initiatives that are developed by managers to enhance the performance of their organizations. Strategic initiatives are the basis for strategy formation in organizations; they represent projects that are designed to provide strategic renewal (Lovas & Ghoshal, 2000; Noda & Bower, 1996) by adding to and altering organizational capabilities (Floyd & Wooldridge, 2000; Leonard-Barton, 1992). Scholars (e.g. Dess et al., 2003; Garvin, 2004) and practitioners (e.g. Atsmon & Smit, 2015; Isern & Pung, 2007) agree that organizations do not have the luxury to be static and need such change in order to be, and remain, competitive in a dynamic environment; strategic initiatives allow firms to do that. Defined as temporary undertakings by groups to add or renew capabilities within an organization (Lechner & Floyd, 2012; Lechner & Kreutzer, 2010a), strategic initiatives take on many forms, including projects for new product development, process improvement, capital investment, growth programs, and corporate new ventures.

As business life cycles have shortened and change became more continuous, traditional adaptive mechanisms such as strategic planning are turning to be increasingly out of sync with the needs of organizations for renewal (Beinhocker & Kaplan, 2002; Wolf & Floyd, 2017). Planning remains a mechanism for improving coordination, integration, and communication (Grant, 2003; Jarzabkowski & Balogun, 2009), but organizational forms are evolving to create additional room and encouragement for initiative-taking by people throughout the organization in order to address the need for

action as and when it arises (Puranam, Alexy, & Reitzig, 2014; Zappos, 2016). This new organizational environment offers a strong breeding ground for initiatives to emerge – whether they are due to autonomous actions of individuals or induced by management mandate.

Despite their importance, strategic initiatives are not always acknowledged as an essential element of the strategy process in the literature. For example, when top management team characteristics are investigated for their impact on firm-level outcomes, strategic initiative formation should be considered as a mediating factor. When middle managers impact strategic decisions in the organizations, they do so through their influence in the creation and implementation of strategic initiatives. There are reasons for not considering strategic initiatives in research: parsimonious theory building is difficult when all the complex processes regarding initiative formation are considered. Moreover, for empirical testing, collection of data becomes difficult and potentially impossible as the utility of secondary data is problematic to study initiatives as a unit of analysis. However, this difficulty should not be an impeding factor for researching these projects as they have significant importance for management practice. As the unit of selection in the intraorganizational process, initiatives are central to understanding how strategic renewal occurs, and factors related to initiative success is crucial to be addressed. To this end, I believe that management literature will benefit from a better understanding of strategic initiatives and that such knowledge will improve management practice.

In order to provide such better understanding, I review the literature surrounding strategic initiatives. In shaping this review, I start with the intraorganizational ecology framework proposed by Burgelman (1991). The generalized evolutionary framework,

which is organized around forces of variation, selection, and retention, is a fundamental and robust theoretical lens that has been employed in the analysis of routines (Nelson & Winter, 1982), organizations (Hannan & Freeman, 1977) and strategic initiatives (Burgelman, 1991). I find this theoretical lens to be fitting given the linkages between strategic initiatives, organizational capabilities and the fact that both concepts have heavily utilized evolutionary models (Murmann, Aldrich, Levinthal, & Winter, 2003).

This paper contributes to the literature in several ways. First, it provides a comprehensive and methodological review of strategic initiatives based on an influential theoretical model (Burgelman, 1991) and identifies factors relating to variation, selection, and retention. Currently, such a review is not available in the literature, except for a limited effort by Lechner and Kreutzer (2010a) which was not sufficiently broad to capture all of the relevant research. Thus, this review can synthesize the existing knowledge and identify the future directions that the recently bourgeoning literature on strategic initiatives should take (e.g. Anand et al., 2016; Deichmann & van den Ende, 2014; Hutchison-Krupat, 2018; Kreutzer et al., 2015).

This review will also contribute to the literature by showing that, despite the somewhat limited scope of the literature that could be explicitly identified as "strategic initiative" related (e.g. Burgelman, 2002; Canales, 2015; Klingebiel & De Meyer, 2013; Lechner & Floyd, 2012; Walter et al., 2016), there is significant amount of research from surrounding fields that provide insights into strategic initiatives – for example from new product development (e.g. Li, Maggitti, Smith, Tesluk, & Katila, 2013; van Oorschot, Akkermans, Sengupta, & Wassenhove, 2013), or middle management perspectives (e.g. Dutton, Ashford, O' Neill, Hayes, & Wierba, 1997; Pappas & Wooldridge, 2007). Thus,

while management literature treats new product development and intrapreneurial projects as different phenomena based on their characteristics, this review will provide an integration and an abstraction to a more general concept and phenomenon of interest: strategic initiatives.

Finally, this review will also show the important role strategic initiatives play in the process of strategy formation. This review shows that the characteristics of the environment, together with the priorities of the top management, as enacted through formal rules and routines and informal norms and values, play a critical role in selecting strategic initiatives in the organization. The interaction between external and internal forces and factors related to initiatives themselves, such as initiative content and group processes, explain initiative outcomes. The external environment provides both variation in the form of changing industry conditions and customer expectations and acts as a potential source of selection. Thus, I argue that strategic initiatives are a critical but often unrecognized interface wherein external and internal sources of variation and selection interact and impact outcomes. Given the growing interest in the concept of interfaces (e.g. AOM, 2016; McIntyre & Srinivasan, 2017; Simsek, Heavey, & Fox, 2018), this review provides a timely validation of this approach to the literature.

Overall, I believe that the expanding literature on strategic initiatives would benefit from an organization of the literature on the topic, providing a holistic understanding of strategic initiatives, cross-pollinating ideas between different streams of literature and offering a rationale for initiatives as an important unit of analysis in strategic management research. This paper is organized in the following way. In the next section, I provide an explanation of the methodology used to review the relevant

literature. In the review section, I first define strategic initiatives and provide a background on the intraorganizational ecology framework, followed by an overview of the literature on strategic initiatives. The final section explores future research directions.

Methodology

Strategic initiatives are defined as temporary undertakings by groups to add or renew capabilities within an organization (Lechner & Floyd, 2012; Lechner & Kreutzer, 2010a). They take on many forms including projects for new product development, process improvement, capital investment, growth programs, and corporate new ventures. Because of this wide variety of contexts, the literature surrounding strategic initiatives is fragmented across different streams of research which do not use a consistent syntax, making it difficult to identify relevant keywords. For example, some of the influential papers among scholars studying strategic initiatives do not contain the phrase 'strategic initiative' in their keyword lists, abstracts or titles (e.g. Burgelman, 1991; Lovas & Ghoshal, 2000; McGrath, 2001; Mintzberg & Waters, 1985).

In order to adequately review the existing literature, I take a two-pronged approach toward classifying relevant papers. For either approach, I did not limit my search to a specific time frame and included articles that are in-press up to December 2018. First, I identified the following journals as a starting point: *Academy of Management Journal, Academy of Management Review, Administrative Science Quarterly, California Management Review, Entrepreneurship: Theory & Practice, Harvard Business Review, Journal of Business Venturing, Journal of International Business Studies, Journal of Management, Journal of Management Studies, Management*

Science, Organization Science, Organization Studies, Research Policy, and *Strategic Management Journal*. I selected these journals as they constitute a combination of the premier publications that are methodologically investigated in recent reviews (e.g. Felin, Foss, & Ployhart, 2015; Helfat & Martin, 2015; Nyberg, Moliterno, Hale, & Lepak, 2014). Additionally, journals such as *Entrepreneurship Theory & Practice, Journal of Business Venturing* or *Harvard Business Review* are outlets that cover and publish articles concerning strategic initiatives written for both academic and managerial audiences. Thus, this set of journals provides a robust base to begin my review.

I undertook a search of papers for the following keywords: 'initiative', 'corporate entrepreneurship', 'intrapreneurship', 'internal corporate venturing', 'new product', and 'capital investment'. These keywords were selected due to their relevance to strategic initiatives; keyword searches were done within titles, abstracts, and author-supplied keywords. I utilized journals' own databases to do my search as I was interested in finding published papers as well as in-press, or early access, articles. A total of 1,686 articles were identified through these searches.

My second approach followed the method used by Simsek, Fox, and Heavey (2015). I identified three publications by Burgelman (1983a, 1983b, 1983c) as important and influential articles for any researcher exploring strategic initiative formation. Using these articles as a starting point, I searched for the phrase "strategic initiative" among those articles that cite any of these three publications. In other words, I searched for the phrase "strategic initiative" – anywhere in the text – among the forward citations of Burgelman (1983a, 1983b, 1983c). I utilized Google Scholar to undertake this search. Google Scholar is not very suitable to undertake bibliometric analyses as it's search

options are not as customizable as other databases such as Web of Science or Scotus. However, compared to these databases, Google Scholar provides a more comprehensive coverage and constitutes a credible alternative (Harzing & Alakangas, 2016). Through this search, I identified 189 additional publications. I excluded masters and doctoral theses and books but investigated all other journal articles, regardless of publication outlet.

In order to narrow down the constituent list of papers, I specifically focused on within-organization strategic initiative formation, thus collaborations, mergers, and acquisitions across organizational boundaries are not within the scope of this review. Through reading the abstracts, I identified papers that provide insights into the processes of strategic initiative formation within organizations. If I could not decide based on the abstract, I read the entire paper. Specifically, I began with the intraorganizational ecology perspective as a theoretical guidepost and investigated whether the paper in question contributed to our understanding of how a strategic initiative is formed, selected or retained. This suggests that papers included in this review explore factors contributing to variation of strategic initiatives, i.e. expanding or narrowing the quantity and quality of initiatives that are undertaken; factors contributing to selection, i.e. aspects that increase probability of future development and/or intraorganizational success; and factors contributing to retention, i.e. to an initiative's external success and/or its future retainment in the organizations structures, knowledge bases and culture. Once I determined that the paper contributes to our understanding of initiative formation, I investigated the specific factors discussed within the paper (i.e. different types of actors, structures, and processes) and the area they correspond to within the variation-selection-

retention framework. Additionally, I created a short summary of the paper. The final list of papers can be found in Appendix B, along with their contributions, summaries, and orientation towards practice (P) or research (C-Conceptual, QL-Qualitative, QT-Quantitative, or Mix-Mixed Methods).

Review of the Literature

General Trends

Overall this review includes 222 articles that make a significant impact on our understanding of strategic initiative formation. Figure 1 shows the number of articles identified in each year. Of these 222 articles, over 40% (92) were written since 2010, indicating the growing interest in the area. While the review did not have a beginning time frame, low article counts during the 1980s can be attributed to several factors such as my identification of Burgelman articles for forward citation search; the fact that two of the searched journals either did not exist (*Organization Science*) or was formed during this decade (*Journal of Business Venturing* in 1985); as well as the general novelty of the strategic initiative concept and the then-recent emergence of strategy process research domain. However, even discounting these early years, the review clearly shows an increasing trend over the years. Note that 2014-2019 column does include accepted articles that are posted online by December 2018, i.e. in-press but not yet officially published. It is likely that the final number of published articles for this last period will exceed 49 by the end of 2019.

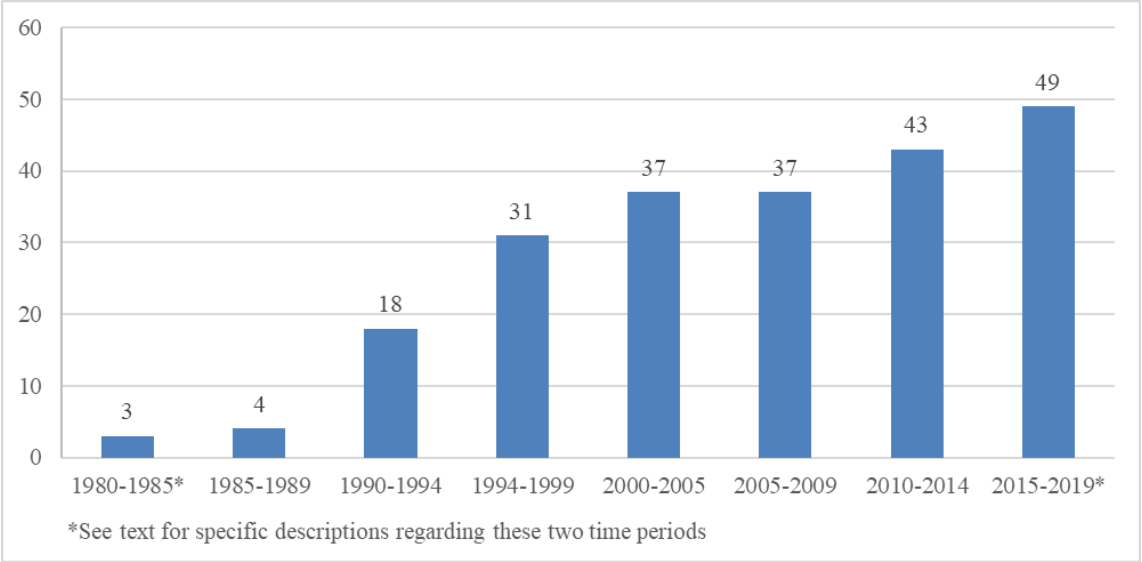


Figure 1: Articles Identified in Each 5-Year Time Frame

A Definition

What are strategic initiatives? There are multiple definitions of strategic initiatives, some made explicit and some implicitly defined. Burgelman (1983a) identifies strategic initiatives as management induced or autonomously developed entrepreneurial opportunities within organizations. McGrath (2001) categorizes them as new ideas that can create new capabilities and competitive advantage. Lovas & Ghoshal (2000) define them as independent projects that are intended to create or appropriate economic value from the environment.

In this dissertation, I use a definition that has been recited in recent research (e.g. Lechner & Floyd, 2012; Lechner & Kreutzer, 2010a; Walter et al., 2016); strategic initiatives are temporary group undertakings that have the potential to add, renew and alter organizational capabilities and impact organizational performance. These undertakings can take on many forms such as initiatives relating to new product development (e.g. Danneels, 2002; Leonard-Barton, 1992), capital investment (e.g.

Maritan, 2001; Thomas III & Waring, 1999), revenue growth (e.g. Kreutzer et al., 2015; Lechner & Kreutzer, 2010b), operational improvement (Lechner & Floyd, 2012) or new business development (e.g. Burgelman, 1991; Shi & Prescott, 2012).

The specific definition of strategic initiatives used is not particularly crucial as long as it identifies the main elements of strategic initiatives and their characteristics. For example, strategic initiatives fall outside of normal day-to-day operations and, even if the origin of the idea is emergent (Mintzberg & Waters, 1985), they are ultimately coordinated within the organizational structure. While I identify strategic initiatives as temporary, their influence on organizational capabilities is not necessarily so. In fact, Lechner and Kreutzer (2010a) note that the impact of strategic initiatives on the organizational context is largely irreversible. However, apart from initiatives that significantly alter organizations, such as mergers and acquisitions, most strategic initiatives follow a timeline that begins with its initiation, development, and conclusion. This process could best be described through the intraorganizational ecology perspective, advocated by Burgelman (1991) and others (e.g. Lovas & Ghoshal, 2000; Mirabeau & Maguire, 2014; Noda & Bower, 1996; Pratap & Saha, 2018), that identify sources of variation, factors impacting selection and the process of retention.

More specifically, a strategic initiative begins its 'life' as an idea that is influenced by different sources of variation – an opportunity in the environment, an ambitious middle manager or a newly minted CEO – and after receiving impetus from the management, it gets developed through a series of resource allocation decisions. This development process is undertaken by an initiative team composed of individuals representing different functions, hierarchies, and interests, and takes place in a selection

environment within the organization governed by formal and informal rules of the organizational context. Through the resource allocation process, a strategic initiative takes shape through an incremental sequence of formulation and implementation and – if ultimately successful – becomes embedded in organizational processes, routines, and capabilities. This embeddedness allows the organization to ultimately reshape the sources of variation and the selection environment. The following section will provide a more detailed review of strategic initiative development from an ecological perspective; this framework is represented in Figure 2. Note that while the scheme of variation, selection, and retention was driven by Burgelman's framework, the model shown is the result of the literature review.

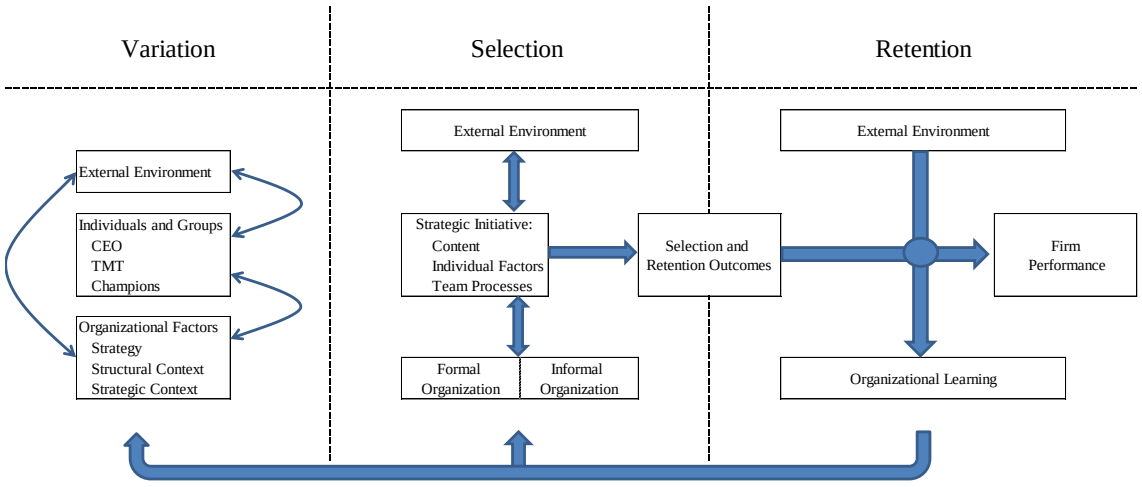


Figure 2: Theoretical Framework

Why the Intraorganizational Ecology Framework?

This review is centered around the intraorganizational ecology framework (Burgelman, 1991) which itself is based on a "Generalized Darwinist Approach" (Breslin, 2011). First published in the Origin of Species (1859), Darwin's theories on natural selection and reproduction of biological forms have been broadened and applied

frequently to a variety of domains outside of biology including psychology, language, economics, and organizations (Breslin, 2011). Specific to organization theory, macro theories that investigate groups of organizations, such as organizational ecology (Carroll, 1984; Hannan & Freeman, 1977) borrowed from Darwin's ideas. Nelson and Winter (1982) also used similar concepts in explaining economic performance of organizations within markets through micro-phenomena such as routines (Cyert & March, 1963). Nelson and Winter (1982) has been in-turn very influential (Murmann et al., 2003) and laid the foundations for strategic management theories on the resource-based view (Barney, 1991; Wernerfelt, 1984), knowledge-based view (Grant, 1996; Kogut & Zander, 1992), and dynamic capabilities perspective (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997).

Burgelman (1991) proposes a variation-selection-retention framework arising out of his intensive investigations at Intel Corporation. Viewing organizations as ecologies of strategic initiatives, Burgelman suggests that "strategy results, in part, from selection and retention operating on internal variation associated with strategic initiatives" (Burgelman, 1991; 240). Variation is the result of both induced and autonomous processes, initiatives arising due to managerial actions within, and outside, of the scope of current organizational strategy. Internal selection happens through structural and strategic contexts (Burgelman, 1983a), both autonomous and induced initiatives requiring approval from administrative mechanisms as well as support from middle and upper management. Retention is viewed through organizational learning of new competencies and activities, which in turn are used to change the induced process and organizational strategy ex-post.

Burgelman (1991) proposes strategic initiative to be the appropriate level of analysis for the intraorganizational ecology framework. This approach diverges from the dominant usages of ecological perspectives in the management literature which focuses on either routines (e.g. Deken, Carlile, Berends, & Lauche, 2016; Felin, Foss, Heimeriks, & Madsen, 2012; Pentland & Feldman, 2005) or communities and populations (Baum & Shipilov, 2006; Carroll & Swaminathan, 2000). Moreover, while partly built upon evolutionary economics perspectives (Winter, 2003), research in organizational learning and dynamic capabilities uses multiple levels of analysis (Argote & Greve, 2007), including organizations themselves (e.g. Greve, 2008; Helfat, 1997; Sirmon, Hitt, Arregle, & Campbell, 2010). Thus, by proposing strategic initiatives as a unit of analysis, Burgelman diverged from the literature that used routines, organizations or groups of organizations.

Discussions surrounding the appropriate level of analysis is abundant (e.g. Breslin, 2016; Felin & Hesterly, 2007; Kremser & Schreyögg, 2016; Murmann et al., 2003; Winter, 2013) and Burgelman's approach of focusing on strategic initiatives have been criticized for not clearly identifying and describing "the evolution of discrete units of selection at different levels within this co-evolutionary hierarchy" (Breslin, 2011, p. 228). The issue of the level of analysis is crucial: in the biological world, variation, selection, and retention mechanisms are argued to act on genes that have the potential to be passed on to future generations (Breslin, 2016). However, it is not always clear what specific entity in the organizational world should represent the genes of biology.

Nelson and Winter (1982) propose routines as the representation of the genotype – the *replicator* (Hodgson & Knudsen, 2004) that copies and repeats itself through

recurrent patterns of action (Breslin, 2016). Hodgson and Knudsen (2004) argue that while routines might represent the replicator, the *interactor*, or the entity that interacts with its surroundings, is the firm. They note that the firm is interacting with the environment as a coherent whole and that the nature of these interactions causes differential replication of the replicators – i.e. the routines. Thus, while routines can be the underlying cause of selection in the environment, the fact that organizational demise likely means the demise of the routines themselves make the argument for firms as a unit of analysis in the selection environment more convincing (Hodgson & Knudsen, 2004).

Basing the discussion on evolutionary biology, the roles of the replicator and the enactor are likely to be played by the routine and the organization, thus limiting the unit of analysis for evolutionary perspectives to these two units – other than larger groups or populations. In other words, from a traditional perspective, the roles that the individual or the team play in organizations do not have a direct relevant equivalency from biological perspectives. More recently, Breslin (2016) argued for a new perspective on evolutionary equivalency where the entity-based selection might be augmented with a practice-based selection unit, where "ideas, capabilities and knowledge are viewed as being enacted in practice and having an existence through those actions" of individuals and groups within the organization (p. 60). This multilevel perspective of seeing the individual and groups in the organization as part of the selection environment is partly based on the interactionist views of seeing organizational behaviors (Burrell & Morgan, 1979; Vaara & Whittington, 2012) as well as the emergence of the microfoundations movement (Felin et al., 2015), specifically focusing on the role of individuals undertaking organizational routines (Felin et al., 2012; Felin & Hesterly, 2007; Winter, 2013).

Burgelman (1991) identified the intraorganizational environment, with administrative and cultural mechanisms, as his focus for the selection environment, thus the strategic initiative with its own profit/loss function (Lovas & Ghoshal, 2000) as the unit of analysis is analogous to the firm in the external environment. However, Burgelman (1991) did not exclude the external environment from strategic initiative formation; variation, especially for autonomous initiatives, is influenced by the external environment and, moreover, "effectiveness of internal selection processes may depend on how closely they correspond to the selection pressures exerted by the current external environment" (p. 250). Thus, while the criticism based on Burgelman's approach of identifying strategic initiatives as a unit of selection is not unfounded depending on how the selection is undertaken, it is being bridged. Recent scholarship acknowledges the multilevel foundations of organizational ecology and direct representations to biology are becoming less common. For example, while the routines as the unit of analysis has long been held, the interrelations between routines are being considered as an important phenomenon to study (Deken et al., 2016; Kremser & Schreyögg, 2016) and new levels of analysis – for example, routine clusters – are being proposed. Overall, it can be argued that organizations and social phenomena do not always mirror biology, and that borrowed ideas do not need to perfectly mirror past identification. However, evolutionary perspectives do provide explanations of the dynamic and path dependent processes through variation, selection, and retention mechanisms within and between organizations, and thus are insightful frameworks into management theory and practice (Barnett & Burgelman, 1996).

With respect to strategic initiatives themselves as the unit of analysis, researchers drawing explicitly from evolutionary perspectives (e.g. Brauer & Heitmann, 2013; Canales, 2015; Lovas & Ghoshal, 2000) as well as others such as behavioral perspectives (e.g. Dahlander & Piezunka, 2014; Lechner & Floyd, 2012; Walter et al., 2016) have utilized strategic initiatives as a primary unit of analysis. This is not surprising. Strategic initiatives represent temporary groups undertaking capability development projects, as such they represent important elements of an organization's strategy process and future performance. In their development, individuals and organizational capabilities play an important role, but they are also subject to the intraorganizational context – strategic and structural – as well as the external environment whose fit is essential for selection. In other words, some initiatives succeed and some fail, and this is partly due to competition among initiatives due to resource requirements and the political and administrative actions of those who are outside of the initiative group. Thus, strategic initiatives play an important role as a nexus or an interface in which different forces interact leading to performance outcomes, ultimately, at the organization level. In sum, these important ventures are an appropriate unit of analysis, whether one subscribes to the literal understandings of evolutionary explanations for organizational outcomes or not.

Variation in Strategic Initiative Formation

My review of the literature identifies three main sources of variation in strategic initiatives. Individuals and groups within the organization, organizational context, and factors in the external environment all impact the variety of strategic initiatives.

Role of Individuals and Groups. Starting with the individuals and groups, I will first focus on the upper management. Literature has shown that upper management plays

an important role in determining the strategic direction of the firm (e.g. Finkelstein et al., 2009; Hambrick & Mason, 1984) and it is not surprising that they have a direct and an indirect impact on the variation of strategic initiatives.

There is somewhat limited research on the direct impact of upper management on strategic initiative variation. This is due to the selection of outcome variables, as I will discuss later, most research that informs conditions relating to initiative formation is not conducted at the initiative level. There are a few examples of research covering this direct impact – especially from the new product development literature. TMT characteristics, such as their tenure and experience, impact new product market entry (Boeker, 1997): recruitment of new TMT members from product markets where a firm does not currently compete in, increases the likelihood of future products offerings in those markets. CEOs' temporal focus and leadership – whether they are oriented towards the past, the present or the future – impacts the extent to which firms undertake entrepreneurial activities on innovation, corporate venturing and strategic renewal (Chen & Nadkarni, 2017) as well as the rate that new products are introduced in relation to environmental dynamism (Nadkarni & Chen, 2014). Li and coauthors (2013) find that TMT's search intensity and cognitive focus also alter the rate of new product introductions. The types of new products undertaken is found to be influenced by TMT's confidence in the success of future products (Simon & Shrader, 2012). Finally, upper management's involvement in initiative development also depends on their type: compared to existing capabilities and products, new capability development projects (Maritan, 2001) and more innovative projects (Day, 1994) are more likely to be initiated by senior managers. Recent research stresses the importance of senior management undertaking a direct involvement in the

initiative development process, even for autonomous initiatives (Barney, Foss, & Lyngsie, 2018).

Most research, however, focuses on indirect ways upper management impacts variation in initiative formation. Firms' ambidextrous (Tushman, Smith, & Binns, 2011) and entrepreneurial orientations (Lumpkin & Dess, 1996) as well as their level of corporate entrepreneurship (Heavey, Simsek, Roche, & Kelly, 2009; Kellermanns & Eddleston, 2006; Zahra, Filatotchev, & Wright, 2009; Zahra, Neubaum, & Huse, 2000) have been explored through the TMT and CEO characteristics. This research shows that TMT cognitive characteristics such as the need for achievement and uncertainty tolerance (Lumpkin & Dess, 1996), absorptive capacity (Zahra et al., 2009), willingness and commitment to change (Azulay, Lerner, & Tishler, 2002; Kellermanns & Eddleston, 2006); structural issues such as increased stock ownership (Kotlar & Sieger, 2018; Zahra et al., 2000); and behavioral processes such as decision comprehensiveness and behavioral integration (Heavey et al., 2009; Lubatkin, Simsek, Ling, & Veiga, 2006) might increase the likelihood, or alter the types, of entrepreneurial action in a firm – in other words, these characteristics likely influence the variety (or lack thereof) of strategic initiatives.

Another indirect, but much more consequential impact of upper management is through their influence on the organizational context. CEO's and top management are largely responsible in the determination of the structural context (Bower, 1970; Burgelman, 1983a) in which strategic initiatives are developed. Structural characteristics of the organization; formalized hierarchical positions and relationships, formal activities regarding planning and resource allocation, criteria for measuring managerial activities

and performance, or the appointment of certain individuals to important positions all impact the variety of initiatives that emerge, and these characteristics are largely governed by the decisions of upper management. Moreover, through their influence on the organizational norms, values, and culture, top management influences the strategic context through which, specifically autonomous, initiatives are rationalized, negotiated and implemented.

There are many studies that explain the processes through which the forces in the organizational context interact to create variation in strategic initiative formation. While more limited in scope, the role of CEOs and TMTs in the determination of the context is also articulated (e.g. Burgelman, 1983b; Lovas & Ghoshal, 2000; Mirabeau & Maguire, 2014; Noda & Bower, 1996). This determination of the context can limit the scope for variety, for example, Andy Grove's focused strategy vector at Intel Corporation limited the influence of strategic context and made strategy making a more strictly induced activity (Burgelman, 2002). This is expected as top managers are found to imprint their organizations with their own cognitive orientations (Narayanan, Colwell, & Douglas, 2009), vision and strategy (Simons, 1991, 1994), and beliefs and values (Marginson, 2002), all of which create roadmaps for their employees towards what is acceptable and what is not (Ren & Guo, 2011). As such, for organizational renewal, leadership teams might need to be changed in order to develop new roadmaps to overcome organizational rigidities (Bartlett & Ghoshal, 1995; Rosenbloom, 2000).

Upper managements' actions in creating and altering the organizational context have significant impact for initiative variation as this context has a role in the autonomous efforts of employees in the organization. Bower (1970) noted that managers

care about their "batting average" and will be cognizant about the intraorganizational context on whether to support or champion specific initiatives. Negative performance feedback, both as an individual and as a unit, also motivate managers to undertake search and championing activities, especially for divergent initiatives (Tarakci, Ateş, Floyd, Ahn, & Wooldridge, 2018). Similarly, Dutton and coauthors (1997) argue that middle managers consider the context and potential favorability of an initiative when deciding to undertake issue-selling activities. Research has also shown that extrinsic rewards and benefits, which are a part of the organizational structures, increase the likelihood of undertaking autonomous behaviors, issue selling and initiative championing (e.g. Burgelman, 1983c; De Clercq et al., 2011; Ethiraj, Ramasubbu, & Krishnan, 2012). Thus, not only the upper management plays a direct role in creating variation but also is a factor behind the intraorganizational context which influences the actions of other employees in relation to strategic initiatives.

While important, the organizational context is one of the many factors that influence individuals and groups for variation of strategic initiatives. Burgelman (1983a, 1991) argues that lower level managers and operational employees are closer to the organizational boundaries – they interact with the customers, competitors and general environment, and as such, they are important elements in creating the variation needed for strategic initiatives. Floyd & Lane (2000) argue that operational and mid-level managers are more likely to be in critical roles when inducing divergent actions as they will be experimenting and learning new ideas from their environments and in turn championing them to upper management. Lovas & Ghoshal (2000) identify all employees as sources of variation, due to their human and social capital. The identification of human

and social capital – knowledge, skills and values, and relationships among people in a network – is helpful in exploring the role of individuals in creating variation.

The knowledge, skills, and experience of individuals in the organization are likely to induce variation in strategic initiatives. For example, Deichmann and coauthors (Deichmann & Jensen, 2018; Deichmann & van den Ende, 2014) show that past initiative championing experiences of individuals are indicative of idea generation and future initiative championing. Partly based on their role in the organization, it is shown that employees knowledge stock and their suggestions improve the likelihood of new product and service innovations (Craig, 1996; Smith, Collins, & Clark, 2005). However, their knowledge bases can also become impediments, Kim and Mauborgne (2015) argue that managers' mental models can prevent them from thinking outside of the box and keep them in their own markets with limited exploration in uncertain areas. To combat this behavior, Abrahamson (2000) suggests hiring generalists who can experiment with and combine different ideas, processes, and cultures – he suggests such people are also likely to be boundary spanners. As such, recognizing the importance of social capital, literature explored formal organizational hierarchies as well as informal social networks. Hierarchical relationships influence championing: higher and more centrally located actors champion an increased number of ideas (Hornsby, Kuratko, Shepherd, & Bott, 2009) which are more likely to be innovative (Day, 1994). Pappas and Wooldridge (2007) identified informal social networks as an important factor for strategic influence and boundary spanning; more central middle managers were more likely to undertake divergent activity. External social networks of managers also influence their divergent behavior as they become more likely to discover new ideas and opportunities in the

environment (Rogan & Mors, 2017). Social networks are also important to gain support from different constituencies in the organization (Cross, Borgatti, & Parker, 2002); at early stages, a large network with strong ties helps new product development projects get initial funding (Kijkuit & van den Ende, 2010), as such informal networks of individuals can help overcome the chaotic political forces through which organizational decision-making happens (Hirschhorn, 2002).

Organizational Context in Variation. The above discussion shows that CEOs and top managers have significant impact for the variation of strategic initiatives, and a part of this influence is through their role in setting the organizational context. In the earlier section, I briefly discussed the role of the context, while interacting with the individual factors, in the variation of strategic initiatives. There is a significant body of work that investigates the role of the organizational context, and while they might assume top management is responsible for the internal environment, these papers do not directly consider upper management's influence, rather they focus on the role of the context in variation. In this section, I will expand on this literature.

Burgelman (1983a, 1983b, 1983c) identifies three fundamental elements of the organizational context: *concept of strategy*, *structural context*, and *strategic context*. Concept of strategy refers to the articulation of the current understanding of how the organization should set its goals, set its business portfolio and allocate resources to different parts of the organization. It provides a guideline or a reference point for strategic actors in the organization. Structural context refers to the administrative mechanisms that are designed by the top management to induce and influence organizational members to undertake activity that is in-line with the current concept of

strategy. While Burgelman's early work in 1983 does not explicitly include informal mechanisms of influence, such as values, norms, and culture, but the structural context is a "broad envelope concept" (Burgelman, 1983a, p. 65) and is understood to incorporate these mechanisms alongside the formalized relationships, structures, and operating procedures (e.g. Burgelman, 1994; Floyd & Lane, 2000; Gibson & Birkinshaw, 2004; Pettigrew, 1987). Finally, the strategic context refers to the political activity and retroactive rationalization undertaken to incorporate autonomous strategic activity into the concept of strategy. Autonomous strategic activity needs to be merged into the concept of strategy, and in turn to the structural context, and strategic context refers to the championing required to gain support and redefine organizational strategy to include divergent strategic behaviors.

There is a significant relationship, and conflict, between strategic and structural contexts. This is not surprising as the purpose of structural context is to induce behaviors from managers that are in-line with the concept of strategy and limit the degree of divergent behaviors that can be detrimental to organizational functioning. Leonard-Barton (1992) described this conflict as a paradox for capability building: while organizational capabilities are needed for new product development, they also constrain variation and the extent to which innovative activity can be undertaken. Structural context becomes an inertial force that limits the extent to which a firm can respond to changing conditions – as such, success in highly turbulent environments requires significant changes to the structural context (Craig, 1996). Floyd & Lane (2000) describes conflict at the individual level as a role-conflict for the managers in an

organization; facilitating implementation of initiatives that deploy existing capabilities while being expected to innovate and experiment with new ones.

Authors have explored ways to overcome this paradox between the structural context and innovation outside of the concept of strategy. Structural separation from the rest of the organization, autonomy, limiting corporate involvement have been suggested as practical guidelines to create exploratory projects (Anthony, Duncan, & Siren, 2014; Birkinshaw, Hood, & Jonsson, 1998; Day & Schoemaker, 2000; DeSimone, Hatsopoulos, O'Brien, Harris, & Holt, 1995; Takeuchi & Nonaka, 1986). These guidelines suggest that upper management should allow for some flexibility in the organization and support a balance between autonomous and induced strategic actions (Burgelman & Grove, 2007). This balance can be represented by top management's intent to change; for example, being open to the cannibalization of existing product lines influences the degree of exploration in new products (Danneels & Sethi, 2011). This willingness to change is also represented in the literature through different typologies of strategy formation (e.g. Hart, 1992; Mintzberg & Waters, 1985) which argue the importance of the top management in providing a balanced approach to the creation of strategic initiatives through a continuum of purely deliberate and rationally planned to completely emergent and unconnected. This literature suggests that there are different modes of operating, for example strictly authoritarian vs. completely open, similar to the ideal type categories (organic vs. mechanistic) proposed by Burns and Stalker (1961), and that a balance between these modes might improve overall performance. Supporting this argument, Sandhu and Kulik (2018) find that neither strict nor vague definitions of new managerial roles positively impact effective initiative championing and implementation.

As noted above, through a powerful CEO and clearly articulated vision, organizations can expand or limit the variety of initiatives being developed (Burgelman, 2002). Literature shows that articulation and dissemination of the expectations through the structural context is very important for top management to induce expected strategic behaviors. Antoncic & Hisrich (2001) find that communication and organizational support is positively associated with intrapreneurial activity. Birkinshaw (1997) finds that the degree of communication between parent and subsidiary is related to the types of subsidiary initiatives undertaken, more internally oriented initiatives (such as redistribution of assets) are associated with high levels of communication. Ramus and Steger (2000) show that a well-communicated environmental strategy is associated with an increased willingness to promote ecologically friendly initiatives. Communication of strategy also needs to be supported by a commitment from the top management (Azulay et al., 2002), backed by immediate supervisors (Ramus & Steger, 2000) and articulated in the organizational structures (Neilson, Pasternack, & Van Nuys, 2005). Neilson and coauthors (2005) call organizations that cannot effectively communicate their intent 'passive-aggressive organizations' where individuals pay lip-service to the strategic intent but only show minimal effort so that they will appear compliant. Ford and Ford (2009) note the importance of leadership in the dissemination of intent, but also in overcoming resistance to change; they argue that effective leadership for managing strategic initiatives comes in both building awareness but also listening to feedback that underlies the resistance.

Beyond communication, the very structural characteristics and activities of organizations have also been investigated as part of the research in this area. A recent

stream of literature focuses on the existence of a formal office of strategic management (Kaplan, Norton, & Sher, 2005) and its associated chief strategy officer (Breene, Nunes, & Shill, 2007; Menz & Scheef, 2014), and argues them to be important in the efficient management of strategic initiatives. Cash, Earl, and Morison (2008) proposes the creation of two separate entrepreneurial teams, one for novel experimentation and another for their integration to existing practices. Simon (1993) argues that strategic planning activities must explore new ideas, alternatives, and opportunities for sustained competitive advantage. Archibugi, Filippetti, and Frenz (2013) find that firms that have internal research and development departments tend to undertake more exploratory innovation during economic crises. Others focus on the role of departments and organizational structure in initiative development: manufacturing departments are argued to be important for variation in the front-end of new product development (Gerwin, 1993) as well as setting the strategic priorities of the organization (Garvin, 1993). Emphasizing quality and flexibility within the organization is found to be positively associated with new product innovation (Alegre-Vidal, Lapiedra-Alcamí, & Chiva-Gómez, 2004).

Knowledge-based explorations of organizational context are also helpful in identifying variation in strategic initiatives. Zahra, Nielsen, and Bogner (1999) argue that corporate entrepreneurial activities form a basis for new knowledge creation which in-turn builds competencies for future entrepreneurship. Goldenberg, Mazursky, Horowitz, and Levav (2003) suggests using existing products, and their customers, as a basis for new product development but without being very incremental or radical. Salvato (2003) shows that experience from past successful and unsuccessful projects are at the core of future successful initiatives; he argues that such knowledge is combined with resources

and routines to produce new initiatives and innovation. Jensen, Johnson, Lorenz, and Lundvall (2007) show that firms that utilize both tacit and explicit learning, learning by doing and learning from scientific and technological knowledge, are more likely to innovate new products and services. Absorptive capacity is an important consideration for benefitting from newly created knowledge, Hullova, Trott, and Simms (2016) recently argue that complementarity between product and process innovations depend upon firm's absorptive capacity – firms with high levels of absorptive capacity will be better able to synchronously innovate products and processes. Beise and Stahl (1999) find that public research helps firm innovation, especially for new product development, however, benefitting from such research depends on firms' existing abilities and internal research and development. Similarly, Roper, Du, and Love (2008) find internal research and development and external knowledge sources to show strong complementarity; internal and external knowledge sources are instrumental in both new product and new process innovation projects. Despite these findings, Dushnitsky and Lenox (2005) also show that while benefitting from new venture investments for new knowledge creation depend on absorptive capacity, too much overlap does not provide additional benefits.

Beyond the more codified characteristics of the organization, norms, values and culture impacts variation. As noted earlier, communication of norms and values is important for corporate entrepreneurial activity (Zahra, 1991) and these are used to induce action from individuals in the organization (Marginson, 2002; Simons, 1991, 1994). Morris and coauthors (Morris, Avila, & Alien, 1993; Morris, Davis, & Allen, 1994) investigated the degree to which an organization emphasizes individualism, or collectivism, and found that extremes, in either case, are negatively associated with

corporate entrepreneurship. Taylor (2010) shows that a competitive internal environment between existing and developing products improve initiative performance and allow for the adoption of newly developed technology into the next generation of products.

External Environment on Variation. Environment creates the context in which variation for strategic initiatives can be found. As noted earlier, external environment can potentially provide a favorable context, as well as an inspiration, to the individuals in the organization to act. Burgelman and others show that those actors who are on the boundaries of the organization and interact with the suppliers, customers and regulators are sources of variation for the simple fact that they are interacting with the environment. In this section, I will discuss some of the external actors and the role environment plays in variation.

There are several actors who are outside of the focal organization boundaries and who induce significant variation with initiative development. Customers are one of them. Customers not only provide ideas for new products, they are potential co-creators helping a firm develop new capabilities, i.e. they also operate in the selection environment (Nambisan, 2002; Schweisfurth, 2017). Being customer-oriented helps firms identify the types of initiatives they need to undertake (Anthony et al., 2014; Craig, 1996; DeSimone et al., 1995) and customers are shown to help firms identify new avenues. However recent research also suggests that successfully inducing variation from customers is limited to a small number of firms, benefitting from customer suggestions require being proactive in attaining them (Dahlander & Piezunka, 2014). Additionally, customers' impact on variation is not necessarily enough, the firm needs to be able to match it with relevant technology (Danneels, 2002; Ethiraj et al., 2012) and the types of innovation that

follow customer demands depend on the idea characteristics itself (Schemmann, Herrmann, Chappin, & Heimeriks, 2016). Even in failure though, experience with past customer demands can create opportunities to create new ideas and solutions with future clients (Hargadon & Sutton, 1997). Suppliers are also a source of variation. Handfield, Ragatz, Petersen, and Monczka (1999) note that involving suppliers in new product development can help the process, especially for complex products, suppliers can provide valuable insights into idea generation and design. Moreover, empirical work shows that such integration can help lower costs associated with innovative activity (Bidault, Despres, & Butler, 1998).

Characteristics and changes in the institutional environment create opportunities for new strategic initiatives to emerge as well as potential pitfalls. For example, responses to changes in the institutional environment will be considered in a sequential fashion, looking first at intra-, and then inter-, organizational solutions based on firm competencies (Ginsberg & Venkatraman, 1995). Changing institutional logics create zones where new ideas can emerge and experimentation can occur (Heinze & Weber, 2016): compared to firms in Japan and Germany, firms in the US have lower rates of capital investment, Thomas III & Waring (1999) partly explain this phenomenon by focusing on the institutional environments which prioritize future investment returns in the US and availability of resources in Japan and Germany. Specific industry conditions, such as the availability of public funding (Brown, Martinsson, & Petersen, 2017; Cappelen, Raknerud, & Rybalka, 2012), economic crises (Archibugi et al., 2013), competitor (Craig, 1996; Thrane, Blaabjerg, & Møller, 2010) and stakeholder pressures and actions (Hess, Rogovsky, & Dunfee, 2002; Shi et al., 2018), or intellectual property

protection (Dushnitsky & Lenox, 2005) provide incentives, and direction, for innovative activity.

Similar to internal knowledge, external knowledge plays a role in creating variety for strategic initiatives, and have complementary effects for innovative activity on products and processes (Roper et al., 2008). Institutions such as universities and independent research labs create knowledge that firms can coopt for innovation and development; of course, their utilization is dependent on the firm's own absorptive capacity (Beise & Stahl, 1999). In order to benefit from such external knowledge firms must be open to receiving them, actively searching and experimenting (den Hond, 1998) while creating an organizational context that is shielded from internal pressures (Day & Schoemaker, 2000).

Moving away from specific conditions, general environmental characteristics such as uncertainty, munificence, and dynamism have received the most interest in the literature. Unsurprisingly, under such scrutiny, there have been conflicting findings. For example, Russell and Russell (1992) found uncertainty in the environment to be positively associated with an entrepreneurial strategy, but McKelvie, Haynie, and Gustavsson (2011) find that uncertainty decreases decision-makers willingness to act, especially when firms face uncertainty regarding available responses. Zahra (1996) finds that firms are more likely to undertake radical product innovations and pioneer technological change in dynamic environments whereas Simsek, Veiga, and Lubatkin (2007) find that dynamism negatively impacts corporate entrepreneurship. Moreover, Simsek and coauthors find that this relationship is mediated by the level of discretionary slack and that munificence, or the availability of resources in the firm's environment, has

a positive impact on corporate entrepreneurship. In contrast, Antoncic and Hisrich (2001) did not find a significant relationship between environmental dynamism and entrepreneurial activity in organizations.

Moderating impact of environmental characteristics are also shown (Lumpkin & Dess, 1996). Willingness to cannibalize existing product lines for more exploration is moderated by turbulence in the customer environment when turbulence is high the relationship between cannibalization and exploration is higher (Danneels & Sethi, 2011). Environmental hostility, but not dynamism, moderates the impact of managerial overconfidence on new product portfolio such that under hostile environments the positive relationship was stronger.

Selection in Strategic Initiative Formation

In this section, I focus on the forces in action during strategic initiative selection. I will be discussing forces that stem from the structural and strategic context under the "formal and informal organization"; initiative level characteristics at the "initiative characteristics"; and the influence of the environment under the "external environment" sections.

Note that when discussing selection environment, I am including papers that indicate that a certain factor – for example, an initiative's exploratory content or the informal social networks of the initiative team – has an impact on the formation of the initiative beyond creating variation. In other words, previous section discussed factors that create variety, in this section the focus is on the factors that can reduce variety.

External Environment on Selection. Many of the outside stakeholders, especially customers and suppliers, are argued to be important constituents in the selection of

strategic initiatives. Literature that investigated the effects of customer and supplier involvement in variation also indicate that beyond providing the inspiration and ideas for new products, they can also shape the design process making it more likely that new products can be successful (Anthony et al., 2014; Craig, 1995; DeSimone et al., 1995; Handfield et al., 1999; Hitt et al., 1999; Morgan, Obal, & Anokhin, 2018). den Hond (1998) utilizes the garbage-can model where customers, and their problems, create the environment which impact selection of solutions – this model suggests that environmental selection happens through a fit of intraorganizational solutions to extraorganizational problems. This model is also echoed by others who note the important role environment plays in vetting different initiatives before they are fully implemented (Florén & Frishammar, 2012; Grönlund, Sjödin, & Frishammar, 2010; Hannigan, Seidel, & Yakis-Douglas, 2018). Moreover, researchers note that opinions of those who are outside of the organization can provide different cognitive lenses and deliver a new basis for a more realistic evaluation of the initiative at hand (Lovallo & Kahneman, 2003), and allow for learning from external sources during the development phase (da Cruz, 2018; Takeuchi & Nonaka, 1986; Wolpert, 2002).

External environment also puts pressures on the internal selection environment (Burgelman, 1994) and influence autonomous behaviors by middle managers. Hess and coauthors (2002) argue that external stakeholders put moral pressures on firms to undertake and implement initiatives that fit with their own ideals; the extent to which these initiatives succeed will depend on the fit between stakeholder pressures and organizational competencies. External developments are represented in the internal environment by influencing selection criteria, such as performance dimensions and

thresholds, on which new initiatives are judged upon (Cardinal, Turner, Fern, & Burton, 2011; Green, Welsh, & Dehler, 2003; Pfister, Lack, & Darwin, 2017; Thrane et al., 2010) and environment needs to be taken into account when organizations coordinate their initiative portfolios (Canales & Caldart, 2017; Lechner & Kreutzer, 2010b). When initiatives move forward despite negative outcomes, such persistence is usually accompanied by an insulation from the internal as well as the external environment (Garud & Van de Ven, 1992). Changing conditions in the external environment also require a flexible approach to product and process designs for rapid adaptation to such dynamism (Thomke, 1997). Considering the timing of the strategic initiative in relation to environmental conditions and the availability of dominant products could be beneficial for future success (Chintakananda & McIntyre, 2014).

Initiative Characteristics on Selection. Naturally, initiative characteristics impact the degree to which they will be successful in the intraorganizational environment. In this section, I describe the extant research on this subject; note that initiative characteristics is used as an umbrella concept and includes content issues as well as individual and team level characteristics and processes that impact initiative formation.

Beginning with the content, researchers focused on the types or objective characteristics of initiatives in impacting performance outcomes, on their own and often in interaction with other forces. High degrees of exploration and R&D requirements make initiative development more difficult for firms (Sykes, 1986). As such, Ethiraj and colleagues (2012) find that complexity of innovative activity demanded by customers decrease the likelihood that the firm will undertake it, and firms are more likely to undertake new product launches at smaller scales when uncertainty regarding the product

is high (McKelvie et al., 2011). The difficulty of implementing exploratory initiatives also stems from the fact that initiatives that are more incremental are less politicized and follow a more rational decision-making process (Maritan, 2001).

Danneels & Sethi (2011) find that willingness to cannibalize from existing products and future-oriented market scanning increase the exploratory content of new products. Schemmann and colleagues (2016) argue that while customers can serve as idea generators, the ideas that get picked up for implementation tend to be more innovative and popular and fit with organizational priorities. Cappelen and coauthors (2012) find that tax credits help firms develop process improvement initiatives but not necessarily new product initiatives. Radical innovations, which can also lead to larger customer audiences, are more likely to be adopted by competitors through imitation (Lee, Smith, & Grimm, 2003).

Individuals and teams undertaking initiative development are researched as well. Burgelman documents the activities undertaken by champions of initiatives (Burgelman, 1983b, 1983c, 1991, 1994): the role of the champion does not end when the initiative becomes a formal project, rather it continues within the strategic context through negotiation for gaining support and developing the initiative to become a formalized part of organizational routines. Lechner and Floyd (2012) show the positive impact of group influence activities, such as coalition building, use of formal authority, and rational justification on initiative performance. Moreover, they find the former two activities to be more important when exploration is high. Heinze and Weber (2016) find that intrapreneurs leverage their own status in getting to positions where they might change the organizational logic, attempt to gain proprietary control over resources, and create

zones where ideas could be exchanged with the incumbent logic thus increasing understanding and decreasing resistance. In order to overcome this resistance, champions often use discursive practices designed to legitimate the initiative in the intraorganizational context and decrease resistance to change (Mirabeau & Maguire, 2014).

These findings suggest the power and the legitimation of the champions is an important factor, Day (1994) finds that TMT members sponsor and champion more exploratory initiatives compared to lower level corporate staff. Moreover, Dörrenbächer and Gammelgaard (2016) find that when power is highly asymmetrical between subsidiaries and parent organizations, issue-selling activities that depend on rational justification, past successes and avoidance of negative attention might not be enough to develop a new portfolio of products or processes. As such, social networks play an important role in advocating for an initiative for gaining informal support and power. Lovas and Ghoshal (2000) show that initiatives which attract individuals with more social capital – alongside human capital as they are both embodied in people – are more likely to continue and receive support from the top management. Similar to the results by Pappas and Wooldridge (2007), Battilana and Casciaro (2012, 2013) find that successful change agents tend to be more central in the informal network, a divergent initiative required a bridging network, or with structural holes, whereas a cohesive network was more instrumental for non-divergent change. However, Lechner, Frankenberger, and Floyd (2010) show that structural holes, alongside centrality and tie strength, have inverted-U shaped relationships with initiative success in that after a point, these social network characteristics might impede initiative development. Moreover, the effects of tie-

strength and centrality are more pronounced when the initiative is more exploratory. This negative performance effect in exploratory initiatives could be the result of the difficulties stemming from knowledge complexity. Hansen (1999) finds that accessing complex interunit knowledge requires strong ties and transfer of highly complex knowledge takes more time. Moreover, accessing outside sources of knowledge through social networks does not come without costs (Rogan & Mors, 2017); Hansen, Mors, and Løvås (2005) find that intra-subsidiary network density and strength reduces the likelihood of gathering outside information while outside network size increases the probability of gathering new knowledge but at higher search and transfer costs.

Social networks of the champions and the initiative team are crucial in overcoming the resistance to change and competing goals of different functions in the organization (Lovas & Ghoshal, 2000). Cross-functional nature of strategic initiatives requires an active approach to handle the inevitable conflict that arises when collaboration is expected but not always delivered. Weiss and Hughes (2005) suggest the need for involvement of not just the focal team members but also their supervisors and having a transparent process which identifies the resolution rationale. This suggestion echoes the finding that avoiding inter-functional conflict can negatively impact new product development whereas collaboration and compromise have positive effects (Xie, Song, & Stringfellow, 1998). Team diversity can have a negative impact on team performance (Ancona & Caldwell, 1992b), but diversity improves communication with organizational members outside of the initiative and the degree of this communication can help the team adhere to budgets and schedules and improve technical quality (Keller, 2001). Moreover, as a functionally diverse team undertakes the task at hand, they are

more likely to suffer from conflict, but communication and expression of task-related issues can reduce the negative impact of conflict on team performance (Lovelace et al., 2001). Thus, a transparent process can impede the political considerations which create barriers to cohesion – these barriers can exist even when team members have previous working experience with each other and enthusiasm for the initiative (Hitt et al., 1999).

In addition to the conflict that arises due to cross-functional strategic initiative teams, implementation process also creates its problems. Strategic initiatives operate within the organizational context with the explicit concern of renewing organizational capabilities. However, this creates problems beyond what could be interpreted as an interdepartmental conflict but as how to change organizational processes while making sure that existing operation runs smoothly? One way to resolve this question is to insulate the initiative from the internal environment and provide autonomy to the team (Takeuchi & Nonaka, 1986). Exploratory learning also improves if the initiative is provided with goal and supervisory autonomy (McGrath, 2001), but such autonomy does not mean complete insulation because that also invites a lack of outside perspective, and potentially a "re-invention of the wheel" which can duplicate existing capabilities (Govindarajan & Trimble, 2010). Insulation from others limits external knowledge influences and trial-and-error learning (Garud & Van de Ven, 1992); team learning improves with trial-and-error and while interacting with intra- and extra- organizational environments (Lynn, 1998; Lynn, Morone, & Paulson, 1996; Maidique & Zirger, 1985; McGrath, 1995). Small scale experimentation and product launches can provide learning-before-doing, especially when the technology or the process being investigated is less divergent from existing

knowledge (Pisano, 1996), which echo the view that customers can be idea generators as well as co-creators of knowledge (Nambisan, 2002).

Based on Nonaka's knowledge dimensions (1994), Schulze and Hoegl (2006) find that socialization with potentially affected departments at early concept phase and combination in development phase help initiative success and Taylor (2010) argues that internal competition can enhance adoption of new technologies across initiatives. In fact, socialization and internalization across departments help firms identify novel ideas for new products (Schulze & Hoegl, 2008). High knowledge transfer between cross-functional specialists is required when a firm is undertaking radical initiatives, but the aforementioned high costs of knowledge transfer (Hansen et al., 2005) can be overcome with the use of transactive memory systems, modular development, and prototyping (Schmickl & Kieser, 2008).

Leadership, both within the strategic initiative and at higher levels, have a significant impact on initiative selection. A large body of literature, mainly from the practitioner perspective, points to several factors that can improve success for strategic initiatives. Hirschhorn (2002) asks change leaders to undertake a political campaign to secure alliances; a marketing campaign to listen to outsiders, and a military campaign to secure valuable resources. Hirschorn (2002) also suggest creating small beachheads: innovative pilot projects that can provide feedback, similar to the suggestion by Matta and Ashkenas (2003) who argue that dividing large-scale initiatives into micro-projects might allow for better results as uncertainty will reduce and control can be more effective. Reduction of uncertainty surrounding the initiative is crucial as it influences the behaviors of initiative managers. Monsen, Patzelt, and Saxton (2010) find that profit-

sharing positively impacts a manager's propensity to participate in a new initiative but low success probability and high risk decreases this positive impact. Moreover, Davila (2003) shows that short-term incentives to initiative managers are less helpful for new product success when uncertainty is high as reliable measures for success are difficult to create.

Resistance to change is normal in an organization and can be used as a core resource for learning (Ford & Ford, 2009) and resistance can be overcome with dialogue and engagement (Beer & Nohria, 2000; Kim & Mauborgne, 2003). Katzenbach, Steffen, and Kronley (2012) suggest leaders work with the organization's culture, which can become a powerful inertial force, and attempt incremental changes rather than wholesale transformations. Such large transformations usually require significant change in structures as well as a change in top management roles and activities (Ghoshal & Bartlett, 1995). Building social relationships, both within the organization and the strategic initiative team, helps achieve collaboration necessary to achieve the complex tasks that strategic initiatives undertake. Gratton and Erickson (2007) suggest top managers exemplify such collaboration amongst themselves so that it can be expected from initiative leaders as well. As noted earlier, social networks of the individuals in the strategic initiative team are crucial for gathering new knowledge and organizational support (e.g. Battilana & Casciaro, 2012; Lechner et al., 2010; Pappas & Wooldridge, 2007). Team size and diversity across different dimensions help bring necessary skills and experiences to a strategic initiative team (Ancona & Caldwell, 1992a; Sirkin, Keenan, & Jackson, 2005; Subramaniam & Venkatraman, 2001) but they can also undermine collaboration that is necessary (Gratton & Erickson, 2007). Previous

experiences with each other might facilitate collaboration in teams (Gratton & Erickson, 2007), and previous experience with initiative building helps future success, individuals who failed in previous championing efforts are more likely to initiate new ideas but involving individuals with previous successes in other strategic initiatives improves the likelihood of future resource allocation (Deichmann & van den Ende, 2014). Ravasi and Turati (2005) show that previous experiences and knowledge of team members can initiate a virtuous (or vicious) cycle of learning: related knowledge bases increase control which reduces perceptions of uncertainty and increases the commitment of time, attention, and resources, and in turn, allow for the knowledge base to increase.

The specific team processes have received some interest as well. Klingebiel and De Meyer, (2013) show that during strategic initiative implementation, teams undertake a diligent and rational process to create solutions for different potential scenarios as an adaptation mechanism. However, when these teams are faced with previously unknown or unconsidered events, they undertake a more ad-hoc problem-solving process that is less likely to be rational. This finding reverberates the findings by McGrath, MacMillan, and Venkatraman (1995) who show that understanding cause and effect relationships and effective problem solving improves competency development. Oppositely, when such rationality reduces, it is more difficult to perform: van Oorschot and coauthors (2013) find that the difficulty of realizing the troubles surrounding a strategic initiative comes from the information filters that team members utilize: mixed performance reviews, problems that are caused by understaffing, or responding to delays by stretching future deadlines all create filters for team members that limit their ability to correctly assess the situation. Apart from inter-group learning discussed above, team-level learning activities

(search, process, codify, practice) also improve initiative performance, especially when exploration is high (Walter et al., 2016). Lê and Jarzabkowski (2015) find that intra-team conflict regarding task issues help the team define issues surrounding the initiative whereas process related conflicts help with coordination; Lê and Jarzabkowski also show the recursive nature of this process and that conflict can only be effective if the managers involved are aware of it and respond appropriately. Conflict can influence political behavior in a group which in turn harms performance (Eisenhardt & Bourgeois, 1988), however effective use of managerial controls can overcome political behavior (Kreutzer et al., 2015).

Organizational Context: Formal and Informal Organization. Another force in the selection environment is the organizational context. As noted earlier, the extant research focused on multiple selection forces in tandem, for example, exploratory content and social networks (e.g. Battilana & Casciaro, 2012, 2013; Lechner et al., 2010), thus I've already discussed some of the important factors in the organizational context. But there are other concerns for this section as well.

One aspect of the intraorganizational context that received significant attention is the organizational capabilities. I've already discussed the importance of learning through intraorganizational ties, cross-functional experts, and trial-and-error through small scale experimentation which are related to developing strategic initiatives. However, fit with existing organizational capabilities is an important aspect. There is evidence that strategic initiatives that are divergent and exploratory are more likely to face difficulties in implementation and have lower overall performance (e.g. Lechner & Floyd, 2012; Maritan, 2001; Sykes, 1986; Walter et al., 2016). Anand and coauthors (2016) find that

past experiences in specific initiatives help firms develop new ones, however, there is a self-selection bias: firms repeat similar initiatives because they had previous successes in those domains. Salvato (2003) argues that core micro-strategies – resources and routines that stem from past successes and failures – are at the core of new initiatives, combining these with new routines and resources create new innovation. Danneels (2002) proposes a continuum of exploration and exploitation based on competencies related to customers (i.e. knowledge of customer market, distribution channels, etc.) and technology (i.e. manufacturing know-how, equipment, etc.) and argues that pure exploitation can be described as activities when the firm lacks competencies in both areas. Garrett Jr. and Covin (2015) find that internal ventures perform better when their parent firms have familiarity with the intended market and provide input into potential objectives. Similarly, a fit between tacit knowledge about markets and team characteristics drive new product development (Subramaniam & Venkatraman, 2001). Suarez and Lanzolla (2005) argue that organizational capabilities play an important role in determining whether a new initiative can create a first movers advantage for a firm; they note that marketing-related capabilities will be important in rapidly growing markets, whereas R&D related capabilities will be instrumental under fast-changing technologies. Canales (2015) finds that the extent to which an initiative is feasible, in relation to existing capabilities, was more important for selection when the initiative in question is originated from operational levels; with top-down initiatives, selection was more dependent upon fit with strategic intentions.

The process model proposed by Burgelman (1983a) shows the complex nature of strategy making in organizations. The structures that are designed to induce strategic

behavior also become impediments against new innovations – thus while strategy follows structure, those initiatives that emerge through the strategic context in-turn change the concept of strategy and structures, hence structure also follows strategy. The initiative formation literature follows the complex and difficult nature of this process. As noted earlier, different researchers suggest the need to protect strategic initiatives from organizational culture and structures to give them the opportunity to create value, potentially in ways that do not fit with the current concept of strategy (Day & Schoemaker, 2000; Jassawalla & Sashittal, 2000; Lynn, 1998; Takeuchi & Nonaka, 1986). Team leaders interact and facilitate intra- and inter- group collaboration and communication (Jassawalla & Sashittal, 2000) and organizational leaders must create an environment where this could be effective. Lechner and Kreutzer (2010b) propose formalization of routines, centralization of decision-making, and informal social relations as levers to coordinate growth initiatives. Similarly, Cross and colleagues (2002) argue that informal social networks help coordination and integration across strategic initiatives. Clear selection criteria, such as timetables and schedules, targets, reward, and incentives help initiative teams navigate the intraorganizational context (Beer & Nohria, 2000; Hess et al., 2002; Kim & Mauborgne, 2003; Simons, 1994). Royer (2003) argues that rules and regulations that create clear selection criteria help exit champions who attempt to argue against initiatives that fail to deliver their initial promises. Chief strategy officers and their offices can help organizations disseminate expectations, provide coordination and integrate the knowledge created across different initiatives (Breene et al., 2007; Cash et al., 2008; Kaplan et al., 2005).

Top management team support is crucial to strategic initiative success (Govindarajan & Trimble, 2010; Hitt et al., 1999; Sirkin et al., 2005). Green and coauthors (2003) find that a lack of advocacy by top managers positively influences initiative termination decisions, but advocacy itself is related to top management judgments about initiative performance. Unsurprisingly, when top management actions related to the initiative are perceived to be fair and just, Li, Bingham, and Umphress (2007) find that strategic initiative teams collaborate more and perform better. When top managers are the ones who are spearheading initiative development, communication of the ideas behind the initiative is crucial to gain support; resistance to change is a phenomenon that occurs across hierarchies of the organization and employees at all levels must be engaged for change (Miles, 2010; Strebel, 1996). Lack of communication and engagement with the rest of the organization creates legitimation issues for the initiative and mobilizes resistance against change (Ezzamel, 1994; Ezzamel & Burns, 2005; Florén & Frishammar, 2012).

A Note About Initiative Performance. In the selection section, I've discussed some of the intraorganizational forces that impact the success and failure of strategic initiatives. Many of the articles discussed are practitioner-oriented publications that use small case study examples to provide support for their findings. Moreover, much of the academic research presented use qualitative methods, and of the 93 articles that utilize quantitative methodologies, many are at the firm level which provides challenges for generalization to the initiative level.

A subset of the articles uses initiative level data and there is a large variety of outcomes that have been investigated. Only a few articles are at the initiative level, across

multiple firms, and measure initiative outcomes with objective economic data (e.g. Anand et al., 2016). A significant number of articles, for example, those by Covin, Floyd, Kreutzer, and their coauthors, utilize and adopt a measure developed by McGrath and colleagues (McGrath, 2001; McGrath et al., 1995) for identifying initiative performance. This is a survey measure that asks respondents' (usually external managers) assessment of the initiative performance regarding meeting expectations regarding time, staffing, budgets, etc. as well as meeting expectations regarding overall objectives of the initiative, revenues, and profits. Depending on the study, other outcomes – measured through surveys – such as termination (Green et al., 2003) novelty of innovation (Lovelace et al., 2001; Schulze & Hoegl, 2008), knowledge transfer and costs (Hansen, 1999; Hansen et al., 2005) are also used.

Arguably, some of these outcomes reflect the selection environment and some of them reflect retention. There are a variety of performance outcomes that could follow a strategic initiative; for example, apart from survival, a new product could be eliminated during its development, or once launched, a new product could be eliminated by the firm despite strong sales, eliminated by the firm due to poor sales, or eliminated because the firm dies (Henderson & Stern, 2004). A new process could achieve its cost saving objectives or be abandoned after implementation due to poor performance. More importantly, initiatives fail during development and never have a chance to be fully implemented. In other words, for new initiatives, the outcomes could be due to the internal environment or the external one.

The large majority of the quantitative survey-based work somewhat confounds these performance outcomes. A new product initiative could adhere to budgets and

timelines and be approved for launch but fail in the external environment. This would indicate that the new initiative was “selected” in the intraorganizational environment but failed to become a part of the new concept of strategy, or “retained”, due to poor performance. While the organization has the opportunity to retain the knowledge created, this situation would suggest that the new initiative might have limited impact on the current concept of strategy. As such, Figure 1, provides different initiative outcomes, when appropriate, that fit with the selection and/or the retention of the strategic initiative. Despite this problem, in the selection section, these outcomes are used interchangeably for a more comprehensive approach.

Retention in Strategic Initiative Formation

Burgelman (1991) notes that “retention takes the form of organizational-level learning and distinctive competence, embodied in various ways-organizational goal definition, domain delineation, and shared views of organizational character “ (p. 240). Retention can be seen as the integration of knowledge across the organization, the changing of the concept of strategy as well as the structural context. Based on the above definition, some of the retention issues have already been discussed in the earlier sections, especially when discussing organization-level learning, I’ll be incorporating some of them in this narrative as well.

I first focus on the integration of strategic initiatives into organizational structures and strategy. Strang and Jung (2009) find that adoption of new quality practices by different departments depended upon the structure of the department itself; when there were high wage inequality and job security between white and pink collar employees, the practice failed. Bresnen, Goussevskaia andSwan (2004) also show the difficulty of

retention, project-based organizations represent a challenge for the adoption of new practices due to decentralization and distributed work practices. Similarly, Wiedner, Barrett, and Oborn (2017) show that change initiatives do not necessarily create favorable conditions for its intended target, they also can unintentionally create a priori unknown resources for other parts of the organization. This effect can be triggered by external conditions as well, after a period of economic liberalization in India, Pratap and Saha (2018) found that rapid changes in organizational structures ultimately led to a changing concept of strategy. Within the context of multi-national corporations, Ambos, Andersson, and Birkinshaw (2010) find that subsidiary initiative taking positively influences future autonomy, and paradoxically, monitoring by the parent company.

Most of the research in the retention area is from the organizational learning perspective. I've already discussed the role of social networks in the dissemination of knowledge in earlier sections (e.g. Cross et al., 2002). Moreover, absorptive capacity is the result of past experiences and knowledge creation and it is critical in generating new variation and successful implementation of initiatives (Beise & Stahl, 1999; Dushnitsky & Lenox, 2005; Hullova et al., 2016). Learning that occurs through strategic initiative development creates competencies for future entrepreneurship (Anand et al., 2016; Zahra et al., 2009), and these competencies are the result of both successful and failed projects (Maidique & Zirger, 1985; Salvato, 2003). For example, Taylor (2010) shows that even when new product initiatives fail, the technologies developed can be integrated into existing products. Hargadon and Sutton (1997) show that failed solutions created for customers are embedded in the organization and can become sources for future solutions to new problems. Similarly, Keil, McGrath andTukiainen (2009) argue that viewing

internal ventures based on their own performance might be misleading, many ventures contribute to existing businesses by transferring newly developed capabilities. However, learning does not always follow failure: Corbett, Neck, and DeTienne (2007) find that neither quick termination decisions for underdeveloped initiatives nor allowing initiatives to drift after failure is all-but-certain help entrepreneurial learning. Both Birkinshaw and Haas (2016) and Danneels and Vestal (2018) suggest that learning from failures are achieved only if they are vigorously documented, reviewed, shared and analyzed in the organization. When such an analysis is undertaken, organizations change their ways. For example, Parker and colleagues (2017) show that moving away (positively or negatively) from aspirations of new product quality impact subsequent new product introductions; Parker and coauthors argue that when the product quality falls short of aspirations, problemistic search kicks-in to understand the lack of quality, ultimately delaying future product introductions. The domain in which new products are introduced can be a deciding factor too, Eggers and Suh (2018) find that negative feedback in new domains redirect search in the organization within existing domains whereas failures that occur in experienced areas lead to action in both existing and new domains.

Once implemented, the environment is an important piece of the puzzle for retention. Burgelman's work (1991, 1994) shows the importance of the environment for selection – through environment's influence in selection criteria – and retention. The previously discussed papers that suggest learning-by-doing or experimentation (e.g. den Hond, 1998; Lynn, 1998; Matta & Ashkenas, 2003) stress the importance of the external environment for learning: by undertaking small scale initiatives an organization can learn, gain experience and better implement large-scale attempts. For firm performance, the fit

between strategy, structure and the environment is instrumental (Miles, Snow, Meyer, & Coleman, 1978), and this argument extends to strategic initiatives and environment as well (Chintakananda & McIntyre, 2014; Danneels, 2011; Suarez & Lanzolla, 2005; Zahra, 1996). Moreover, the interaction of the initiative and environment in-turn influences others. Kim and Pennings (2009) find that innovative products, coupled with advertising and endorsements, can decrease uncertainty and risk in the eyes of the customers and push competitors to imitate, thus changing the environmental context. Similarly, Lee and colleagues (2003) find that radical products with large customer audiences induce competitors to adapt to the changing environment by imitation.

Implications for Future Research

An Integration of the Existing Research

I would like to start by integrating the above literature to a short and coherent narrative. Many forces in the organizational environment, internal and external, impact strategic initiative formation. The main force is the top management; top management creates the organizational context – formal hierarchies, decision-making rules, and regulations, and informal norms, values and culture – which act as enablers and constrainers of initiative formation. They provide the means in which different initiatives can emerge and succeed through the actions of individuals in the organization. When faced with an entrepreneurial culture and structures which signal and communicate strategic intent, individuals are more likely to champion initiatives that are outside of the concept of strategy. When faced with focused strict strategy vector, they adhere to the existing norms of organizational strategy. The extent to which environmental

opportunities, and threats, will be reflected in the initiative portfolio is a function of how the organization's structure and culture will be open to such variation.

Unsurprisingly, then, the selection of initiatives is also faced with similar concerns. The top management sets the stage and different factors relating to the initiative has impacts on the final selection. The structures, hierarchies, centralization, and selection criteria, all point to the types of initiatives that can be undertaken. These structures, along with the cultural norms of the organization, constrain the types of action initiative leaders can take. Autonomy and insulation from the internal environment can provide certain leeway for initiatives, especially divergent ones that don't conform to the existing concept of strategy, to move forward, but organizational resistance is ever present. Interacting and engaging with affected parties and active communication is key for successful initiative development at multiple levels: within the team for cohesion, across teams and departments for gaining new knowledge, resources, and political support, and within the organization for overcoming resistance.

Viewing the top management as the primary force in strategic initiative formation does not suggest that they are involved in all decisions; for example, Burgelman (1983b, 1991) shows that adjustment of the intraorganizational context is retroactive, initiative development can clearly occur autonomously through middle manager actions, potentially, in spite of a buy-in from the entire top management team. Moreover, top managers and their initiatives are not immune to internal selection criteria and the structures; they create them but also are constrained by them (Burgelman, 1994; Noda & Bower, 1996). However, it is clear that top managers have the most influence when it comes to the entirety of the variation-selection-retention process.

As such, it is possible to characterize strategic initiatives as a "strategic interface" within the organization. In the call for submissions to the 2017 Annual Meeting, the Academy of Management define an *interface* as "a common boundary or interconnection between systems, concepts or human beings" (AOM, 2016). Inherent to this definition is the notion of interaction of two or more elements that meet at a common boundary. Other definitions stress this point: "A point where two systems, subjects, organizations, etc. meet and interact" (Oxford Dictionary, 2016). In keeping with these definitions, strategic initiatives act as an interface for strategy-making. The strategic initiative has a purpose in that it attempts to add to organizational capabilities, and that purpose creates the boundary with the rest of the organization. Top management creates the organizational context within which the initiative exists. As shown above, this boundary is literally and figuratively permeable: people, knowledge, and resources come in and out, but within the intraorganizational environment, the initiative itself represents a project that is being supported or resisted as a unit. Selection of the initiative depends on both the intraorganizational factors as well as the general environment where the firm is located in. The extent to which organizational boundaries allow the external environment into the intraorganizational context will impact how the selection of the initiative will be dependent upon external forces. In other words, external environment will always be a part of the selection environment, but whether the stage that happens, i.e. selection or retention, will depend upon how open the organization is to such forces.

A Way Forward

Strategic Initiatives as a Unit-of-Analysis. Strategic initiatives are, by definition, exercises in capability development and renewal in organizations (Floyd and Wooldridge,

2000; Lechner and Kreutzer, 2010). As such they represent a foundational element of competitive advantage (Barney, Ketchen, and Wright, 2011). Resource-based theory and its associated fields such as dynamic capabilities, the knowledge-based view, and the micro-foundations perspective all identify firm performance and competitive advantage as the result of successful capability development. Since the development of strategic initiatives, hence capabilities and their renewal over time, are at the core of strategic management research, the field should adjust its focus to reflect this fact. This does not suggest leaving behind firm-level analysis. On the contrary, firm-level approaches help us identify forces that are instrumental at both the organizational and environmental levels. For example, the review presented above puts the upper management as the primary force in strategic initiative formation, without firm-level research, it would be difficult to come to that understanding, however unsurprising it is.

With the above caveat, more research is needed at the initiative level. If organizational capabilities are the source of organizational performance, we need to study the projects intending to renew capabilities. More importantly, looking at the firm-level introduces a type of selection bias into the research. Outcomes such as patent applications (e.g. Cappelen et al., 2012; Dushnitsky & Lenox, 2005), new product introductions (e.g. Boeker, 1997; Nadkarni & Chen, 2014) or the degree of corporate entrepreneurship (e.g. Heavey et al., 2009; Zahra et al., 2009) provides many insights into firm strategic actions. However, as noted by Criscuolo, Dahlander, Grohsjean, and Salter (2017), visible trails from outside sources or aggregate constructs don't always provide insights into the actions firms did not, could not, or decided not to, take. Recent practitioner reports point to failure rates of more than 70% of all strategic initiatives (CGMA, 2016) and not all

failures have a visible record in the market, many can fail in the intraorganizational environment (e.g. Burgelman, 1983c; Criscuolo et al., 2017). As such, conducting analysis at the strategic initiative level will allow uncovering reasons why certain initiatives move forward and others do not.

Moreover, as the review shows, strategic initiative development is the result of a complex intraorganizational environment dependent upon a host of factors including cognitive and behavioral influences over time. Recent calls for research suggest a need to investigate the specific activities that organizational members undertake, for example, the tools for evaluation and measurement (Bromiley & Rau, 2014), business models as systems of activity (Zott, Amit, & Massa, 2011), or the day-to-day activities of organizational members (Vaara & Whittington, 2012). Strategic initiatives represent the real-life practice in which formal and informal activities are undertaken to impact organizational capabilities. They are the interface in which strategy is formulated and implemented. Intraorganizational environment impacts it in many forms, and focusing on the interface where resources, people, knowledge and influence interacts is crucial to understanding the process of strategy making; as such, it is an important context to investigate for advancement in management literature.

Intraorganizational Ecology Model. As I noted earlier, the basis for the review was the variation-selection-retention outline, but the underlying model emerged from the literature. This intraorganizational ecology model proves to be a powerful tool to organize the literature. Majority of the literature reviewed does not utilize the intraorganizational ecology model as their overarching theoretical perspective. In fact, apart from Burgelman's work (e.g. Barnett & Burgelman, 1996; Burgelman, 1991, 2002;

Burgelman & Grove, 2007), few articles in this review explicitly use an ecological perspective as their main theoretical approach (some examples are Canales, 2015; Canales & Caldart, 2017; den Hond, 1998; Pratap & Saha, 2018; Salvato, 2003). Despite this lack of specificity, many of the foundational ideas that come out of the intraorganizational ecology model underpin the extant strategic management research; especially for strategy process (Hutzschenreuter & Kleindienst, 2006) and it is possible to identify the forces in action for the variation-selection-retention model.

However, the lack of temporal theorizing in the extant research shows the difficulty of applying the variation-selection-retention model. Although the intraorganizational ecology model highlights the temporality of strategy making – the iterative process in which initiatives move through the variation-selection-retention stages (e.g. Burgelman, 1983c; Noda and Bower, 1996) – this critical argument gets somewhat overshadowed in empirical, especially quantitative, research. For example, Deichmann & van den Ende (2014) measure initiative success in terms of whether it moves towards the allocation of a significant amount of resources, whereas others measure it according to the extent to which an initiative meets objectives, budgets and timelines (e.g. Kreutzer et al., 2015) or the extent to which an initiative achieves external success (e.g. Anand et al., 2016). However, all these outcomes can lead to different types of learning, and retention of knowledge created, which in turn impact future variation and selection. Existing research does not always acknowledge such issues, partly because of a lack of temporal theorizing. Future research should take time into account; this does not suggest that there is no mention of time in the extant research. However, a majority of research integrates time only as a means towards establishing cause-and-effect

relationships. Qualitative studies undertaken show that strategic initiative development is dynamic over time and moving towards quantitative theorizing that includes time as a factor in-itself would benefit the quality of the research, and arguably allow better implementation of the intraorganizational ecology model.

External Environment. External environment clearly offers opportunities for new initiative ideas to emerge. Literature recently started to examine how information technology and social networking is already providing ideas for firms to implement (da Cruz, 2018; Hannigan et al., 2018; Schemmann et al., 2016). However, recent developments in information technology and social networking are likely going to impact the rapidity of inducing such variation, as well as their force in becoming a factor in selection. For example, recent troubles of United Airlines[1] and Wells Fargo[2] show the power of social networking platforms in disseminating and sharing information, sometimes, literally, overnight. Moreover, competitors can use these adverse events as potential promotions for themselves[3]. While such events are not new – for example, the infamous New Coke and Pepsi's response – the rapid development of these events are likely going to be influential in how firms respond to positive and negative events in their environments. Such events create strong coalitions that force organizations to change their operating procedures and implement new initiatives; for example, following the backlash regarding the forcible removal of a passenger from their airplane, United Airlines is currently developing a new check-in system that allows customers to indicate whether they would be willing to relinquish their seats for compensation. In the absence

[1] https://www.nytimes.com/2017/04/27/business/united-airlines-new-guidelines-policy.html
[2] https://www.nytimes.com/2017/04/25/business/dealbook/wells-fargo-board.html
[3] http://www.npr.org/sections/thetwo-way/2017/04/13/523751772/rival-airlines-pounce-on-uniteds-bad-press

of competitor initiatives in this area, this event might allow United Airlines to streamline their overbooking system, a current industry practice, and provide benefits in the long run. Thus, the changing nature of information technologies creates a new "external environment" with a potential for positive and negative outcomes.

Another issue in the external environment is the role of large-scale crises and jolts. While there is a stream of research that investigates firm responses to environmental changes (Craig, 1996; Ren & Guo, 2011), this and related work has not considered how sudden environmental shocks impact the variation, and selection, of strategic initiatives within an organization. For example, a shock such as the 2007 economic crisis and recession creates uncertainty, threats, and opportunities for new initiatives to emerge; research can investigate firm responses to environments and their ability to survive and potentially benefit, from such events. In this case, the focus would not necessarily be on highly dynamic environments, but rather a sudden shock or a quick wholesale transformation where rules of the game have changed but new rules are yet to be established (Pratap & Saha, 2018). With quick changes across all contexts, it is imperative to think about how sudden changes in the external environment can affect organization decision-making at large.

Finally, constructs such as environmental dynamism and turbulence are widely investigated in the management literature at large, however, I believe this changing nature of the environment requires a more specific perspective into exploring the role of the environment and firm responses. For example, there is a growing body of work that is concerned with how governmental- and policy- level decisions, such as availability of public research funding (Choi & Lee, 2017; Huang & Jong, 2018), legal decisions

concerning accounting and intellectual property standards (Brown et al., 2017; Dushnitsky & Lenox, 2005), impact initiative development. These external decisions may or may not impact the level of environmental dynamism, hostility, or turbulence in the environment, but research that specifically considers such external conditions are more likely to be beneficial to practicing managers. In light of recent discussions surrounding management research and its application to practice, this approach can provide a "leading pathway" towards more impactful research as it would directly engage with managerial concerns that are relevant and timely (Simsek, Bansal, Shaw, Heugens, & Smith, 2018).

Strategic Initiative Content and Teams. Differences across types of strategic initiatives should be made more salient in research. In this review, I brought together different streams of research to attempt to provide a coherent understanding of capability building projects. However, beyond new product development, within the limited literature where strategic initiatives themselves are studied, most classifications regarding their content rely on an initiative's alignment with existing organizational capabilities and current strategy – specifically, exploratory versus exploitive initiatives. However, exploration and exploitation as a classification in-and-of-itself is not enough, for example, recent research suggests process and product innovation initiatives do not follow similar developmental paths (Haneda & Ito, 2018; Hullova et al., 2016; Roper et al., 2008). Others call for differentiating initiatives across its overall purpose too, such as initiatives that intend to grow revenue or improve margins by cutting costs (Lechner & Kreutzer, 2010a). Fittingly, there is a growing literature on growth initiatives (e.g. Kreutzer et al., 2015; Lechner & Kreutzer, 2010b; Shi et al., 2018).

One possible way to think about initiative content can be spearheaded from a configurational perspective (e.g. Sandhu & Kulik, 2018; Wilden et al., 2016; Zimmermann, Raisch, & Cardinal, 2018). Literature clearly shows that the extent to which an organization's capabilities and resources align with the initiative mandate has implications for its developmental journey. An added dimension, however, can focus on the specific intention behind the initiative – such as cost-cutting or growth. A new product can be a replacement for an existing product or intended to create new market opportunities. Cost-cutting can be divergent, for example, adoption of a new manufacturing process, or exploitative, such as increasing capacity with existing processes. Alternatively, product and process related initiatives can also be considered as a dimension in a potential configurational approach. Overall, I argue that a focus on initiative intentions is likely to be useful in explaining heretofore unaccounted for variation in initiative antecedents, developmental processes, and outcomes (Lechner & Kreutzer, 2010a). This kind of approach is also likely to identify different specific activities that need to be undertaken for the selection of different types of initiatives, leading to robust managerial implications.

Despite the large literature, I find that the team-related issues associated with strategic initiatives have been neglected by scholars. Research has made much of the fact that strategic initiatives are usually led by individual champions, but in fact, initiatives are group undertakings. The actors involved in these groups represent different functions, divisions, and hierarchical levels and have aspirations both as individuals and as members of a sub-unit or another coalition. Due to the presence of multiple competing goals that arise from such nested structures, strategic initiative teams are likely to

experience unique dynamics. Although there is research on cross-functional teams (Hitt et al., 1999; Keller, 2001), most of this research focuses on surface level diversity such as demographic variables without focusing on deeper level diversity (Srikanth, Harvey, & Peterson, 2016). Diversity in strategic initiative teams can come from a variety of sources; different backgrounds, departments, hierarchical levels, and interests will all play a role in how this diversity can lead to outcomes positive or negative**.**

Moreover, in an environment where evaluation of initiatives is partly a political process (Lechner & Floyd, 2012; Maritan, 2001), it would also be fruitful to investigate how team-level processes impact strategic initiatives within the larger organizational context. For example, top management teams do not always behave as teams, rather as groups of individuals with little interaction and cohesiveness (Hambrick, 1994; Li & Hambrick, 2005; Simsek, Veiga, Lubatkin, & Dino, 2005) and the extent to which they are behaviorally integrated influences firm-level outcomes. Similarly, due to the nature of strategic initiatives, the people undertaking them will not necessarily be incentivized to work together and their team processes will likely impact outcomes. Individual goals must be accounted for as individual rewards perceived by organizational members are positively associated with intrapreneurial activity (De Clercq et al., 2011; Dutton et al., 1997), but literature is silent on how these individual goals will interact to influence initiative outcomes. As noted in the review, collaboration within and across strategic initiative teams is a key issue for success, thus more research into these teams and the extent to which they can collaborate will provide valuable contributions to the literature.

These observations suggest situating initiative teams within the context of individual self-interest, sub-unit influences, and organizational politics theoretically as

well as methodologically. Scholars argue that team level research, in general, has not paid enough attention to the team within its intraorganizational context (Humphrey & Aime, 2014; Kozlowski & Bell, 2013) and strategic initiatives, in particular, suffers from this phenomena. More research is needed that investigates strategic initiative team, and their internal processes, while linking them to the intraorganizational ecology.

Retention. The factors leading to the retention of strategic initiatives and the consequences of this process should receive more attention in future research. The organizational learning perspective, some of which is reviewed here, shows some of the mechanisms regarding the integration of knowledge to existing structures (e.g. Anand et al., 2016; Keil et al., 2009). However, strategic initiatives also have the potential to redefine the structural context thereby impacting variation and selection of future initiatives. Our knowledge on this subject is mostly dependent upon qualitative studies (e.g. Burgelman, 2002; Keil et al., 2009; Wiedner et al., 2017) that do not necessarily provide generalizable knowledge about relationships between initiative formation and retention. These qualitative studies show the reciprocal nature of the relationship between initiatives and their context, but there is little work on how, for example, organizational members and groups adapt to a changing structural context and attempt to cope with new sources of variation and selection (see Pratap & Saha, 2018 as an exception).

Learning from failure is another avenue that needs added attention. Experimentation and testing for innovation has always been a part of the strategic initiative development process, and scholars always argued that firms that are more innovative are the ones that tend to take risks and have an open culture towards failure (Birkinshaw & Haas, 2016; Day & Schoemaker, 2000; Lynn et al., 1996; Maidique &

Zirger, 1985; Pisano, 1996). Recent research attempts to uncover why some firms are better at this than others, it is possible being open to failure is not necessarily enough, a comprehensive analysis of failure is what is needed to benefit from past experiences (Danneels & Vestal, 2018). It could be argued that it is easier to innovate today, with increased access to funding, global manufacturing, and customers. But the same characteristics can make it easy for competitor imitation as well as make failures more pronounced and viral. Thus, while it is important that firms cannot afford to stay still, learning from inevitable failures can be even more vital.

In this chapter, I provide an extensive review of the relevant research on strategic initiatives. The concept of a strategic initiative could be construed from a broad understanding, and using the recent definitions of the construct, I attempted to narrow it on capability building projects. Despite this attempt, the literature concerning their development is still wide and provides valuable insights into how organizations can successfully attempt to renew their capabilities using such projects. I believe that this paper helps provide an integrative and holistic look into a wide literature and shows future directions that scholars should examine.

CHAPTER 3

STRATEGIC INITIATIVES IN THE INTRAORGANIZATIONAL ECOLOGY: AN INVESTIGATION OF MULTILEVEL GOALS

Strategic initiatives are ambitious and temporary ventures undertaken by groups of individuals from across hierarchical and interdepartmental boundaries (Lechner & Kreutzer, 2010a). Strategic initiatives are designed to add, alter or renew organizational capabilities (Floyd & Wooldridge, 2000; Lechner & Floyd, 2012), and consequently, they have paramount importance for organizations in their quest for competitive advantage (Barney, 1991; Barney, Ketchen, & Wright, 2011; Nag et al., 2007). However, a large majority of strategic initiatives fail to deliver expected results (Kreutzer et al., 2015; Nag et al., 2007; Walter et al., 2016). Scholars argue that strategic initiatives are developed within the intraorganizational context, subject to mechanisms of variation and processes of selection (Burgelman, 1991; Canales, 2015; Lovas & Ghoshal, 2000; Mirabeau & Maguire, 2014). As such it is crucial to investigate forces that impact variation and selection as they play a crucial role in whether or not a strategic initiative is ultimately retained.

One of the important factors in the intraorganizational environment, both for inducing variation and impacting selection, are goals. Everybody has goals. Goals help improve individuals, teams and organizations perform better (e.g. De Clercq, Bouckenooghe, Raja, & Matsyborska, 2013; Kellermanns, Walter, Lechner, & Floyd, 2005; Kristof-Brown & Stevens, 2001; Locke & Latham, 2006), but also negatively impact outcomes by inducing politics and conflict (e.g. Abbas, Raja, Darr, & Bouckenooghe, 2014; Dean & Sharfman, 1996; Guth & MacMillan, 1986; Kreutzer,

Walter, & Cardinal, 2015). Strategic initiatives provide an arena in which these, potentially heterogeneous, goals can have a significant impact on outcomes. Goals of individuals induce variation by impacting their likelihood to initiate, champion and participate in strategic initiatives (Burgelman, 1983a; De Clercq et al., 2011; Dutton et al., 1997; Ethiraj et al., 2012; Ramus & Steger, 2000), and goal differences among different departments influence decision-making in initiative development (Bidwell, 2009, 2012; Kaplan, 2008; Markham, 2000; Voyer, 1994). Moreover, organizational goals, often argued to be the represented by the top management team or the board of directors (e.g. Hambrick & Mason, 1984; Stevenson, Pearce, & Porter, 1985; Van Ees, Gabrielsson, & Huse, 2009), influence the strategic and structural contexts, in which work is performed and decisions are made (Burgelman, 1983a; Cardinal, 2001; Kreutzer et al., 2015). Overall, multilevel goals influence strategic initiative formation both at the variation and selection stages of strategic renewal.

Despite this influence of goals on strategic initiatives, most research fails to acknowledge the impact of goal heterogeneity on the performance of strategic initiatives. While there is an emerging literature on the political behavior surrounding strategic initiatives (Dörrenbächer & Gammelgaard, 2016; Kreutzer et al., 2015; Lechner & Floyd, 2012), they do not explicitly consider goal heterogeneity both surrounding- and within-the strategic initiative. In the literature, when goals are discussed at the initiative level, researchers make one of two choices. When looking at the team and its intraorganizational environment (e.g. Lechner & Floyd, 2012; Lechner, Frankenberger, & Floyd, 2010; Li, Bingham, & Umphress, 2007), they investigate the team as a cohesive whole and implicitly make the assumption that individuals involved in the strategic

initiative all share common goals and work for the efficiency of the strategic initiative. Alternatively, when exploring intrateam processes, discussion of heterogeneous goals are reduced to proxy variables, such as functional heterogeneity or diversity (Ancona & Caldwell, 1992a; Keller, 2001; Lovelace et al., 2001), and are not investigated as specific constructs. Overall, research on strategic initiatives and goals either focuses on the interaction between the team and its environment or within the team itself and an integrative perspective is missing in the literature. Thus, the purpose of this paper is to explore multilevel goals within strategic initiative teams; how teams manage these goals; and how goal heterogeneity can influence initiative development within the intraorganizational environment.

The central argument begins with the assumption that strategic initiative teams are characterized by different configurations of goal heterogeneity and that goal alignment increases the likelihood of advancing in the resource allocation process. By alignment I mean not perfect agreement, but the extent of shared purpose represented by the different configuration of goals possible within a team. I identify advancing in the resource allocation process as an outcome associated with survival in an ecological sense and argue that this advancement requires appropriate team processes that manage different sources of potential failure. For configurations characterized by conflicting goals, organizational context can play a big role in governing which team processes are more effective. Finally, I further observe that advancing in the resource allocation process has a reciprocal influence on goal alignment, thereby increasing the likelihood of future advancement and contributing to initiative survival, but not necessarily to performance. To construct these arguments, I build upon two influential frameworks: first, the

intraorganizational ecology perspective to characterize the development of the initiative within the resource allocation process over time (Burgelman, 1991; Lovas & Ghoshal, 2000) and, second, the team process taxonomy (Marks, Mathieu, & Zaccaro, 2001) as a basis for investigating the relationships between different goal configurations, team processes and initiative performance.

Goal heterogeneity is a central part of the behavioral theory of the firm (Cyert & March, 1963), but it remains an underexplored area (Argote & Greve, 2007; Gavetti et al., 2012; Kotlar, De Massis, Wright, & Frattini, 2018). With this paper, I broaden the body of work within the extended tradition of the behavioral theory of the firm. Specifically, I first contribute to the strategic initiative literature by investigating the interplay of goal heterogeneity, initiative team processes, and performance. The propositions developed in this paper explain how team interactions can become critical in managing different goal heterogeneity configurations that impact the initiative portfolio within an organization's ecology. I show that, while these nested goals impact the variation and selection of strategic initiatives, management of team processes can be crucial in future retention (Keller, 2001; Lechner & Floyd, 2012; van Oorschot et al., 2013). Secondly, these propositions provide insights into the dynamic relationship between goal alignment and development of initiatives in the resource allocation process. I show that this dynamism can help organizations develop successful initiatives or, recursively, lead to pitfalls characterized by escalation of commitment (Fotaki & Hyde, 2015; Noda & Bower, 1996; Sleesman, Conlon, McNamara, & Miles, 2012). Finally, while goal relationships such as individual-team (Kristof-Brown & Stevens, 2001), individual-supervisor (Vancouver & Schmitt, 1991), or department-department (Nauta,

De Dreu, & van der Vaart, 2002) have been investigated, their alignment across multiple levels have not been previously considered (Maloney, Bresman, Zellmer-Bruhn, & Beaver, 2016). This exploration extends the discussion by providing a temporal and multilevel lens to a topic that has been predominantly dyadic.

This paper is organized as follows. First, I provide a short overview of goals and team processes relating to strategic initiatives in the intraorganizational ecology. I then discuss the initial definitions of initiative performance and alignment of goals within strategic initiatives. As individuals represent their departmental goals in the initiative team, I suggest a conceptualization, dubbed personal range of goals, that identifies individual and departmental goals residing at the individual level. Extending the personal range to the team level, I then argue that initiative teams can exhibit high or low separation with respect to the intrateam configuration of personal range of goals. Building on these configurations, I construct the propositions, integrating multilevel goals with team processes and the progression of strategic initiatives in the resource allocation process. I conclude with a discussion of implications for management theory and practice.

Theoretical Background

Strategic Initiatives and Goals

Strategic initiatives are temporary group undertakings that have the potential to add, renew and alter organizational capabilities and impact organizational performance (Lechner & Floyd, 2012; Lechner & Kreutzer, 2010a). Strategic initiatives can be deliberate or emergent (Mintzberg & Waters, 1985), top-down or bottom-up (Burgelman,

1983b), autonomous or induced (Burgelman, 1983a), or exploratory or exploitative (March, 1991), but they form the basis for strategy formation in an organization (Lovas & Ghoshal, 2000; Nag et al., 2007; Noda & Bower, 1996). They can take on many forms such as initiatives relating to new product development (e.g. Danneels, 2002; Leonard-Barton, 1992), capital investment (e.g. Maritan, 2001; Thomas III & Waring, 1999), revenue growth (e.g. Kreutzer, Walter, & Cardinal, 2015; Lechner & Kreutzer, 2010b), operational improvement (Lechner & Floyd, 2012) or new business development (e.g. Burgelman, 1991; Shi & Prescott, 2012)

The literature on strategic initiatives is diverse due to the variety of perspectives used to investigate such projects. Much of the literature focused on the intraorganizational processes in which strategic initiatives are developed (e.g. Burgelman, 1991; Lovas & Ghoshal, 2000; Noda & Bower, 1996), the champions and middle managers who undertake them (e.g. Dutton et al., 1997; Heinze & Weber, 2016; Huy, 2002; Pappas & Wooldridge, 2007), group-level activities which surround strategic initiatives (Lechner & Floyd, 2012; Lechner et al., 2010; Taylor, 2010), as well as the intra-team processes that impact initiative outcomes (Ancona & Caldwell, 1992a; Klingebiel & De Meyer, 2013; Lê & Jarzabkowski, 2015; Walter et al., 2016).

The influence of goals on strategic initiatives and their development has not garnered a lot of direct interest. This is not necessarily surprising: while goals and the resulting potential conflict between individuals and groups in an organization is the core argument behind the behavioral theory of the firm (Cyert & March, 1963; March & Simon, 1958), goal heterogeneity is not directly addressed within most research following the behavioral theory tradition in general, and strategic initiative research in

specific. Much of the research that is directly relevant is studied under the umbrella of organizational politics (Gavetti et al., 2012; Weber & Waeger, 2017). In other words, heterogeneous goals are seen as a precursor of political behavior, thus the literature has developed within this perspective without focusing on the goals themselves.

Empirical investigations show that political behavior stemming from heterogeneous and conflicting goals have negative consequences for initiative development. For example, individuals and groups resist organizational change, and attempt to redirect, delay and even sabotage the implementation of actions that ran counter to their own goals (Guth & MacMillan, 1986; Jarzabkowski & Balogun, 2009). Political behavior is argued to have negative impacts for outcomes such as decision-making effectiveness (Dean & Sharfman, 1996), development of shared values (Hitt et al., 1999), as well as performance (Kreutzer et al., 2015). Inversely, attempting to understand and have concern for the goals of others, is associated with preferable outcomes such as having a problem-solving orientation (Nauta et al., 2002) and improving coordination and performance (St. John & Rue, 1991). Political behavior stemming from goal differences in top management teams is also associated with poor firm performance (De Clercq, Menguc, & Auh, 2009; Eisenhardt & Bourgeois, 1988).

Despite this body of work that focuses on goal heterogeneity through political behavior, there is also research that shows that goals do play other significant roles in the development of strategic initiatives. We know that individuals have their own goals and these goals provide motivations to create and champion strategic initiatives (e.g. De Clercq et al., 2011; De Dreu & Nauta, 2009; Dutton et al., 1997; Ramus & Steger, 2000). Moreover, strategic initiatives are group undertakings that operate across functions and

departments in organizations. As such, individuals are under the influence of their own departmental goals, which can influence the types of tasks undertaken (Ethiraj et al., 2012; Kaplan, 2008; Markham, 2000) as well as their developmental progress (Voyer, 1994). Finally, organizational goals and priorities, which are often articulated by the upper management, may or may not align with the goals of departments, coalitions or different parties. Whether these organizational goals are actually negotiated, and agreed upon by groups in the organization, as Cyert and March (1963) suggest, is not a given factor; theoretical arguments (e.g. Albert, Kreutzer, & Lechner, 2015; Leonard-Barton, 1992) and empirical research (e.g. Burgelman, 1994; Davis & Eisenhardt, 2011; Huy, 2002) show that, especially in times of change, such negotiation and agreement might be lacking among groups in an organization. Thus, a cross-functional initiative team that operates within the intraorganizational environment is subjected to a multitude of potentially conflicting goals, all of which can impact behavior and performance.

Strategic Initiatives and Team Processes

Literature investigating strategic initiatives is wide and fragmented across different streams of research, and it is not any different for the literature on teams that undertake these important projects. For example, relevant papers can be found within the strategic initiative stream (e.g. Kreutzer et al., 2015; Lechner & Floyd, 2012; Lechner et al., 2010) as well as literatures investigating new product development (e.g. Ancona & Caldwell, 1992a; Lovelace et al., 2001; van Oorschot, Akkermans, Sengupta, & Wassenhove, 2013) or corporate entrepreneurship (e.g. Hitt et al., 1999; West, 2007).

Despite the large body of work that investigates strategic initiative teams, most studies do not take an integrative view. There are investigations of communication and

conflict (Ancona & Caldwell, 1992a; Keller, 2001; Lê & Jarzabkowski, 2015; Lovelace et al., 2001), learning (McGrath, 1995; Walter et al., 2016), and decision-making processes (Klingebiel & De Meyer, 2013; McGrath et al., 1995; van Oorschot et al., 2013), but these remain at the team level, linking processes to outcomes. A body of research investigates the activities to gain influence and resources from the organization, either as a team (Lechner & Floyd, 2012; Lechner et al., 2010) or as an extension of the champions in the team (Battilana & Casciaro, 2012; Floyd & Wooldridge, 1997; Pappas & Wooldridge, 2007); but these explorations mostly take a unitary view of the strategic initiative participants within the team. This body of work investigates the activities by strategic initiative team members, in relation to the rest of the organization, but does not integrate within-team heterogeneity with intraorganizational forces. As such, an integrative focus on the strategic initiative team and its ties to the rest of the organization is missing in the literature. However, one finding that is critical is that the activities that team members undertake are of utmost importance for team performance, whether they are confined within the team or relate to the rest of the organization.

As noted above, a wide variety of constructs have been used in the literature to investigate team processes in strategic initiatives. Recently, Marks and colleagues (2001) offered a typology of team processes, which received significant interest from the literature (Kozlowski & Bell, 2013; Mathieu, Hollenbeck, van Knippenberg, & Ilgen, 2017). Marks and colleagues argue that the literature has a variety of terms utilized under the ‘team process’ terminology, but it is unclear what actually constitutes a team process. They further note that a distinction has to be made to differentiate between emergent states and processes, which are defined as “members' interdependent acts that convert

inputs to outcomes through cognitive, verbal, and behavioral activities directed toward organizing taskwork to achieve collective goals" (Marks et al., 2001, p. 357). Marks and colleagues categorized team processes into 3 main classifications each with underlying dimensions. The first category is called *transition processes* which are composed of *mission analysis, goal specification,* and *strategy formulation and planning* dimensions. Marks and coauthors argue that transition processes occur during a phase when teams are primarily evaluating and planning their activities. The second process category is called *action processes* which are composed of *monitoring progress towards goals, systems monitoring, team monitoring, and backup¸* and *coordination* dimensions. Action processes occur when teams are conducting activities that lead to the achievement of goals identified in the transition phase. Finally, *interpersonal processes,* which are active through both transition and action phases, are composed of *conflict management, affect management,* and *motivating/confidence building.* Traditional team models, such as Input-Process-Output, view teamwork from a static perspective (Kozlowski & Bell, 2013), but Marks and colleagues propose a framework that sees teamwork as consisting of several sequential, and maybe simultaneous, cycles of inputs, processes and outputs, each cycle indicating a performance episode. As such, a performance episode consists of transition, followed by action phases, each with their own processes, while interpersonal processes operate throughout. A job that a team completes is done by utilizing multiple, sequential, performance episodes.

This episodic typology provides a robust discussion of team processes as it isolates a complete range of behavioral processes, even at the expense of some emergent affective and cognitive states (Ilgen, Hollenbeck, Johnson, & Jundt, 2005). However, this

model also incorporates a "dynamic, task episodic view of team tasks to identify when particular clusters of behavioral processes would be most relevant" (Kozlowski & Bell, 2013, p. 435) which is in-line with the dominant focus that drives current thinking on teamwork: multilevel, temporally oriented, and stressing interdependence (Humphrey & Aime, 2014; Mathieu et al., 2017; Waller, Okhuysen, & Saghafian, 2016). Moreover, a meta-analytical investigation has shown the validity of the multi-dimensional typology presented by Marks and colleagues (LePine, Piccolo, Jackson, Mathieu, & Saul, 2008). As such, within this paper, I utilize this typology of team processes. This framework provides an up-to-date, empirically tested and valid model of work teams, delivering a comprehensive perspective of team processes in an investigation of the heterogeneous goals that strategic initiatives face.

Overall, the goal of this paper is to understand the impact of heterogeneous goals in strategic initiatives and how to handle them. To achieve this goal, I argue that one needs to take an integrative perspective of different goals in the organization, as such, I first investigate multilevel goals that influence strategic initiatives. In order to handle issues that arise from multilevel goal heterogeneity, I then explore the interaction between multilevel goals and the team processes that are in play during initiative formation.

Theory Development and Propositions

The theory development will first provide a background on the intraorganizational ecology framework that I position my model in. This background, followed by the basic

definitions regarding different types of goal configurations within the team, will form the foundations for the propositions that are developed further in this section.

Intraorganizational Ecology and Initiative Performance

In this paper, I locate strategic initiatives within the intraorganizational ecology perspective. This has been an influential framework in the literature, putting strategic initiatives at the core of strategic management (Burgelman, 1991). Burgelman (1991) proposes a variation-selection-retention framework arising out of his intensive investigations at Intel Corporation. Viewing organizations as ecologies of strategic initiatives, Burgelman suggests that "strategy results, in part, from selection and retention operating on internal variation associated with strategic initiatives" (Burgelman, 1991, p. 240). Variation is the result of both induced and autonomous processes, initiatives arising due to managerial actions within, and outside, of the scope of organizational strategy. Internal selection happens through structural and strategic contexts (Burgelman, 1983a), both autonomous and induced initiatives requiring approval from administrative mechanisms as well as support from middle and upper management. In this perspective, the strategic initiative becomes the unit of analysis where new organizational capabilities are developed under the mechanisms of variation and selection, and ultimately retained within organizational structures, in conjunction with the external environment.

Scholars within this perspective have argued that strategy is the outcome of a continuous and iterative process of resource allocation, rather than grand and formalized statements relating to corporate strategy (Noda & Bower, 1996). This incremental process is best seen through the selection of strategic initiatives over time within the organization: projects from internal variation giving way to the initial impetus, followed

by development through several rounds of resource allocation, and ultimately full implementation. Theory building in this paper is concerned with the stages following the initial impetus, in particular after the strategic initiative moves from an idea stage and becomes a formal project in the developmental pipeline.

Following this perspective, I argue that the dependent variable for the performance of an initiative is its movement, or advancement, in the resource allocation process. Initiatives are developed through an incremental process, governed by fit with the structural and strategic contexts (Burgelman, 1991; Noda & Bower, 1996) as well as feasibility within the internal and external environments (Canales, 2015). As such, all else being equal, an initiative that meets the criteria set forth by the intraorganizational context – both formal and informal – will likely be seen as potentially viable and important for the organization, and thus, worthy to be pursued. This perspective implicitly underlies how extant research has operationalizes strategic initiative performance. Literature predominantly takes a subjective approach to measuring initiative performance and many empirical operationalizations of performance include adhering to internal organizational expectations and requirements such as meeting budget, schedule, quality and staffing requirements (e.g. Garrett Jr. & Covin, 2015; Lechner et al., 2010; McGrath, 2001; McGrath et al., 1995; Walter et al., 2016). These operationalizations demonstrate that meeting organizational objectives and expectations are intrinsically a part of initiative success and it can be directly inferred that meeting such criteria will allow the initiative to be developed even further within the resource allocation process.

The argument above does not necessarily suggest that an initiative which moves within the resource allocation process will ultimately be successful when exposed to the external selection forces; for example, when a new product is launched to the market. In fact, the intraorganizational ecology perspective suggests that performance of an initiative is a fit between the successful implementation of the initiative content, and the content meeting external demands (Burgelman, 1991; Lovas & Ghoshal, 2000). In other words, environmental demands might require actions such as increasing organizational efficiency, increasing sales, or expanding markets, and the ultimate success of the initiative will depend on whether it actually fulfills these demands. The current scope of this paper does not include this more "external" conceptualization of initiative performance.

Definitions

Before I begin the propositions, I will provide a set of definitions that are crucial for setting the propositions. These definitions relate to three important concepts: goal alignment, personal range of goals, and separation of goals within teams.

The first important term needing an explanation is alignment, which I define as having a shared purpose or a common cause. Shared purpose would suggest that two or more individuals or groups have the same goal, or, the goals of an individual can be exactly the same as the goals of her department. Alternatively, two or more individuals or groups can have different goals, but if their goals align, that could indicate a common cause. One person can think that the successful implementation of an initiative can help her receive personal rewards, whereas another person can think that the success of the same initiative will boost the importance of his own department. These two people share

a common cause albeit with different motivations. However, their goals align, as the initiative goal is achieved so do the goals of the two members.

The above argument requires the anchoring of individual and departmental goals to a common reference point. In other words, if the objective is to compare the goals of different constituencies, we require a reference point that is taken as a constant. Since the strategic initiative is the main object of concern in this paper, I define constituent goals as they relate to the strategic initiative goal. Let's observe this conceptualization through several examples. Assume that the initial mandate for a strategic initiative is to grow sales by expanding into different markets. Thus, I argue that the natural way to discuss the alignment of individual and departmental goals is to compare them to the initiative mandate and then think about whether these are aligned or not. For example, an individual team member, from sales department, might see this initiative as an opportunity to move up in the hierarchy, eventually becoming a manager of this new market. On the other hand, another team member who represents the marketing department might see this initiative as means to increase the reach and resources of her department because new marketing operations and personnel might be needed to cover this operation. As such, for these two cases, the goals will be *aligned* with the initiative goal.

However, another initiative can cause the exact opposite effect. For example, an initiative that aims to improve manufacturing efficiency by automating processes and decreasing personnel might meet resistance. Both in terms of individual or department goals, this might be a case where the goals are *misaligned*: departmental goals require

efficiency through personnel reduction and this might actively go against the wishes, and goals, of its employees.

Finally, there is a case to be made about neutrality. For both examples provided above, the R&D department may or may not experience serious repercussions. If the resources and expectations from the R&D department do not change and its personnel won't experience any benefits or risks, the goals of the above initiatives and the goals of the R&D department, and its employees, might show neither alignment nor misalignment. I identify this case as when an individual or department is *indifferent* towards the initiative goal.

The identification of these three categories requires a known objective, as noted above, the initiative goal. However, a global goal or a strategic priority of the organization cannot be considered as the necessary point of reference. While some of these strategic goals may create conflicts, these types of priorities would not be specific enough to generate campaigns with protagonists and antagonists. Moreover, initiatives that are in early idea stages can have fluid goals that are dynamic during these phases. That is why the theory developed here requires a rather specific goal for an initiative that is likely to have received impetus from the hierarchy and officially become a part of the developmental pipeline. The initiative goal does not need to be stable; the theory developed here recognizes the changing nature of initiative goals over time. However, the three distinct categories of goal alignment, goal misalignment, and goal indifference assume that there is an initial stance from the individuals and groups involved in initiative development in relation to the initiative's goal.

Another definition that needs to be incorporated into the discussion is what I call *personal range of goals*. As seen from the above discussion, I expect, in a cross-functional setting such as the strategic initiative, the individuals will act on behalf of themselves as well as a representative of their departments. This argument is much in line with the rest of the literature on teams, i.e. when scholars investigate teams a common control or variable of interest is functional heterogeneity. Cross-functional team members bring expertise to their new environments, improve decision quality and facilitate communication across intraorganizational boundaries (Ancona & Caldwell, 1992a; Tekleab, Karaca, Quigley, & Tsang, 2016; Zander & Kogut, 1995) but they also influence team processes through social categorization and, more importantly, intraorganizational political behavior (Hitt et al., 1999). This suggests that team members don't just represent their own goals, but also act on behalf of departmental interests as well. As such, I argue that individual *and* departmental goals are embedded within individuals in the initiative team and I define this embedded dual goal structure as personal range of goals.

The term personal range is borrowed from Tasheva and Hillman (2018) who investigate the interrelations of multilevel human capital, social capital and team diversity. Tasheva and Hillman (2018) argue that the diversity of human capital exists not only at the team level but also at the individual level. As such, a marketing major who only worked in marketing is going to have less personal range than a mathematics major who worked in sales and marketing. I use a similar conceptualization, but identify individual and departmental goals, in relation to the initiative goal, as constituting the

personal range. A person can have aligned, misaligned or indifferent individual and departmental goals, thus personal range can be any combination of these three categories.

Overall, the goal alignment, misalignment, and indifference, for individual and departmental goals, create the personal range which is ultimately composed of nine different configurations possible at a given point in time. These nine configurations are provided in Table 1; each cell represents a configuration, for example, the northwest corner "Individual Alignment, Department Alignment" cell represents the case in which both individual and departmental goals are aligned with the initiative goal and the southeast corner represents the opposite when both goals are misaligned.

Table 1: Nine Configurations of Individual Personal Range

		Alignment of Individual and Initiative Goals		
		Alignment	Indifference	Misalignment
Alignment of Departmental and Initiative Goals	Alignment	**Individual Alignment (IA) Departmental Alignment (DA)**	**Individual Indifference (ID) Departmental Alignment (DA)**	Individual Misalignment (IM) Departmental Alignment (DA)
	Indifference	**Individual Alignment (IA) Departmental Indifference**	Individual Indifference (ID) Departmental Indifference (DI)	*Individual Misalignment (IM) Departmental Indifference (DI)*
	Misaligment	Individual Alignment (IA) Departmental Misalignment (DM)	*Individual Indifference (ID) Departmental Mislalignment (DM)*	*Individual Misalignment (IM) Departmental Mislalignment (DM)*

Since individual and departmental goals both reside in the individual, I described these nine configurations of personal range at the individual level. However, since strategic initiatives are group undertakings, this discussion must be extended to the team level. At any point in time, each individual in the team can be in any of these nine configurations; thus, in the absence of empirical measurement, discussing heterogeneity of these configurations at the team level poses difficulties. However, a simple yet

parsimonious solution to this problem is to discuss the degree of *separation* within the team regarding the configurations represented in the team.

Harrison and Klein (2007) discuss three types of diversity within a team: separation, variety, and disparity. In this paper, the specific type of team diversity I engage with is separation, which refers to differences in "position or opinion among unit members, primarily of value, belief, or attitude" (p. 1203). The extent to which separation diversity is low or high, according to Harrison and Klein (2007), can best be observed in Figure 3, where each box represents an individual along a continuum regarding a certain belief or attitude. In the low separation case, individuals are near each other in terms of their attitudes. In the high separation case, there exist two modes on opposing ends where the team is equally split. The moderate case occurs when there is more of an even distribution of members along the spectrum.

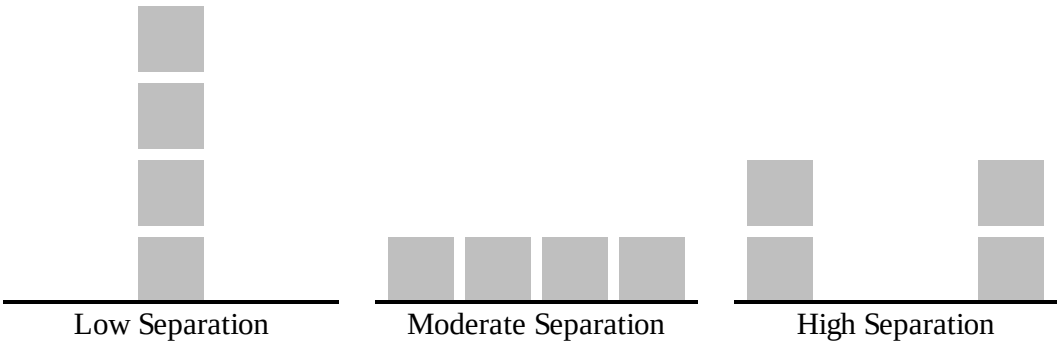


Figure 3: Degrees of Separation (Adapted from Harrison & Klein, 2007)

In this paper, the spectrum can be seen as the extent to which personal ranges overlap among team members, shown in Figure 4. As the theorizing is related to the 2-dimensional conceptualization of personal range presented in Table 1, the figure utilizes the nine personal range configurations as its base. The *low separation* case exhibits consistency and similarity among personal ranges in the team. When there is such

overlap, team members tend to be consistent in terms of how their individual and departmental goals relate to the team goal. For example, building on the market expansion example given earlier, a team mostly composed of individuals from sales and marketing departments might exhibit low separation because their individual and departmental goals all align with the initiative goal. Alternatively, in Figure 4, the specific low separation figure represents a team that exhibits low separation in its members' indifference to the initiative goal.

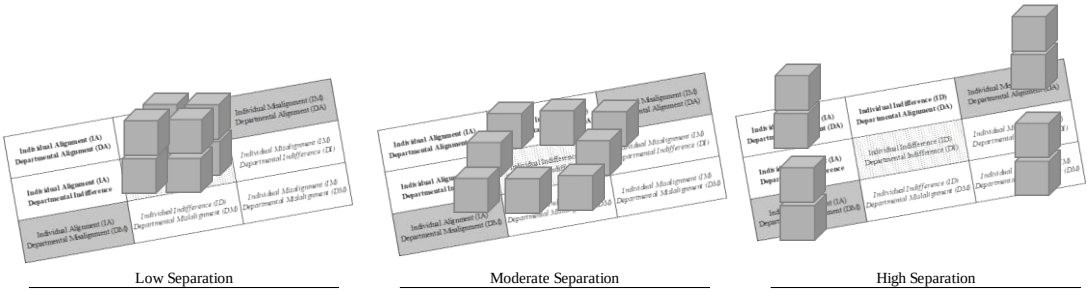


Figure 4: Team Separation as Applied to Strategic Initiative Team Goal Configurations

Consequently, notice that when I describe separation, I don't infer alignment. An eight-member team, composed of eight individuals each in the "Individual Alignment, Departmental Alignment" cell, can be just as consistent as a team (i.e. low separation) with eight individuals in the "Individual Misalignment, Departmental Misalignment" cell.

Overall, low separation refers to overlap in personal ranges. As seen in Figure 4, personal ranges can also show moderate or high separation when there is little or no consistent overlap between individuals. In this paper, my theorizing will engage with the team level heterogeneity of personal ranges and the degree of separation, specifically I will consider contexts when there exists high or low separation of personal range among team members.

Propositions

Having described the three key elements that will be needed for the propositions – alignment, personal range, and separation – I will now develop the theoretical arguments for the propositions. The theoretical model that is described in this paper is shown in Figure 5; this figure represents the overarching perspective taken here, the boxes-and-arrows do not directly represent specific propositions. However, the figure can be summarized as follows: alignment of individual personal ranges and the team's level of separation essentially identify the goal heterogeneity configurations at the team level. Different configurations require different team processes to ensure high performance, represented in this paper by advancement in the resource allocation process. However, this advancement can have a reciprocal effect over time; it can boost alignment and reduce goal separation within the team.

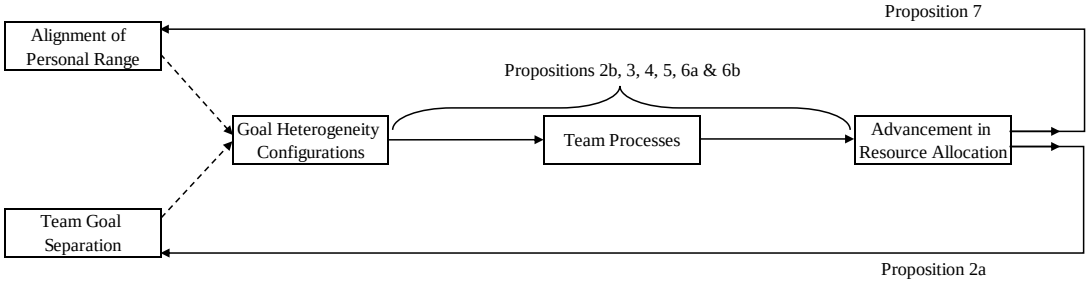


Figure 5: The Overarching Theoretical Model

First, I provide a baseline proposition which can be perceived as an assumption that the rest of the arguments depend upon. Examining the large body of work surrounding goal heterogeneity, there is significant evidence that suggests alignment, consistency, or overlap of goals are desirable for performance. Congruence of personal and team goals positively impact performance both at individual and team levels (Kristof-Brown & Stevens, 2001; Yan & Dooley, 2013), and this also holds for top management

teams (Colbert, Kristof-Brown, Bradley, & Barrick, 2008). Team mental models, defined as having shared understanding of goals and tasks, improve team effectiveness (Kozlowski & Bell, 2013) and teams that require interdependence in tasks and relationships benefit from goal alignment (Humphrey & Aime, 2014). Having shared goals between departments improve performance (St. John & Rue, 1991) whereas goal differences increase conflict (Nauta & Sanders, 2001). At the organizational level, having shared goals across the hierarchy helps organizational performance (Kellermanns, Walter, Floyd, Lechner, & Shaw, 2011).

Moreover, strategic initiatives are developed within a political environment, needing resources, support, and legitimacy. Fit with the concept of strategy signals support from organizational coalitions (Lechner et al., 2010), and in terms of extreme performance and emergence of strategy vectors, it might be the only way strategic initiatives can be implemented (Burgelman, 2002). Gaining support from the rest of the organization is crucial for initiative development (Lechner & Floyd, 2012) and alignment of initiative goals and with strategic priorities eases this requirement. Conversely, strategic initiatives that are divergent or exploratory are more likely to face difficulties in implementation and have lower overall performance (e.g. Lechner & Floyd, 2012; Maritan, 2001; Sykes, 1986; Walter et al., 2016). Recent research also suggests that autonomous initiatives, which usually don't conform to stated organization goals, need legitimation and require a strategic initiative to be constructed as fitting to, or aligning with, the concept of strategy for successful emergence (Mirabeau & Maguire, 2014).

Overall, research shows having goals that are aligned across different levels such as individual-supervisor, individual-team, department-department, department-

organization, initiative-organization all experience performance benefits. In this paper, the concern is not necessarily an "objective" initiative performance, rather the dependent variable is progress in the resource allocation process. Moreover, notice that the initiative in question has moved away from the initial idea stage and became a formal project within the firm's portfolio. Thus, the initiative has an initial explicit goal which can be used to identify the degree of alignment with respect to the departments and individuals in the organization. This explicit goal might change over time, but any change is likely to be relatively incremental; otherwise, the project would be redefined.

Given these conditions regarding the dependent variable and the developmental stage of the initiative, as well as past findings in the literature, there is no reason to suspect that alignment of goals would not be a desirable condition for the initiative to move forward in the resource allocation process. When individuals and departments have a common cause, not only will they cohesively work towards the initiative objective, but also be able to harness their social networks, build coalitions and gain access to resources needed to accomplish their goals. As such:

Proposition 1: Alignment of multilevel (initiative, individual, departmental, organizational) goals is beneficial for the strategic initiative to move forward in the resource allocation process.

In the following paragraphs, I will be discussing the team processes that gain added importance due to the specific set of goal configurations that a team might face. I build upon Marks and colleagues' team process taxonomy (2001) which identified three main team processes: transition, action and interpersonal. Marks and coauthors (2001) argue that these processes are *all* crucial for effective teamwork and the arguments below

do not necessarily discount this perspective or the importance of any of the processes they describe. However, I argue that when faced with a specific set of goal configurations in a team, certain processes gain *added* importance for initiative performance. In other words, the arguments presented here do not discount the value of any team process, rather they discuss the additional emphasis that certain processes should get under specific goal configurations.

First, I begin with a set of propositions that relate to the teams that exhibit moderate or high separation. These teams are characterized by a limited overlap of personal ranges, as shown in Figure 4, suggesting that there are a variety of personal ranges represented within the team. The inherent assumption that I make in this paper is that any level of alignment of goals is important to understand how to manage a team. This notion is very much in-line with the extant research that focuses on team composition; team member attributes influence team processes and outcomes, and understanding such attributes can help in designing more effective teams (Kozlowski & Bell, 2013). Without such an understanding, for example when there is high separation of goals exhibited within a team, it is difficult to manage that team effectively. Thus, decreasing separation of personal range of goals help better manage the team; if the heterogeneity of goals in a team converges around a specific configuration then it can be managed effectively and improve team performance. In other words, any of the nine configurations in Table 1 might be the dominant goal configuration in the team, and, if known, any of these goal configurations can be managed. A *tenth* configuration is the current case I am discussing, when there is more-than-low separation and there is no

dominant configuration per se. As such, I will first theorize about team processes that are beneficial to decrease separation within teams.

I propose that the team processes that relate to transition phases are crucial to decreasing separation in the team over time. For a specific performance episode, transition processes refer to the formulation stage where the mission is analyzed, and tasks and alternative courses of action are identified. Effective handling of transition processes should allow for critical thinking, information processing and understanding of cause-effect relationships which help individuals understand their own roles and expectations. Pearsall, Ellis and Bell (2010) show that such understanding and communication of roles and expectations are crucial in the development of a shared mental model in the team and such mental models increase collective efficacy (Mathieu, Rapp, Maynard, & Mangos, 2009) and team engagement (Miles & Kivlighan Jr., 2008).

Moreover, arguments relating to behavioral integration of team members – the extent to which a group of individuals behaves as a team – stress the importance of joint decision-making, information sharing, and collaboration (e.g. Hambrick, 1994; Simsek, Veiga, Lubatkin, & Dino, 2005; Tekleab et al., 2016). An important aspect of this stream of research is that when semi-autonomous individuals are asked to undertake a task together, such as strategic initiative teams, getting effective results requires group members to behave as teams. Transition processes also highlight the importance of information sharing and joint decision-making, the two "rational" elements stressing successful teamwork for group members.

Combining these arguments, if the team can effectively manage transition processes, the initiative is more likely to move in the resource allocation process. And,

provided the initiative moves along in the resource allocation process, increased efficacy makes it more likely that team members will shift some of their previous stances on the initiative. We know that in high interdependence contexts such as strategic initiatives, collective efficacy helps improve individual performance (Katz-Navon & Erez, 2005). Team members experiencing high individual performance due to the movement of the initiative would be more likely to coalesce around specific goals and decrease separation in the team. As such, when coupled with initiative performance, which is reflected by movement over multiple performance episodes in the resource allocation process, separation can decrease by effective management of transition processes.

Proposition 2a: In teams with high separation, effective management of transition processes will decrease separation over multiple successful performance episodes.

Despite the potential benefits of transition processes for improving the consistency of goals within the team, such effects cannot be achieved in a single performance episode. I argue that until collective cognition forms, or alternatively in the case that it never does, interpersonal processes become important to move the initiative in the resource allocation process. Interpersonal processes – affect management, conflict management and motivating – are active throughout the action and transition phases and they "lay the foundation for the effectiveness of other processes" (Marks et al., 2001, p. 368). Preemptive management of negative affect and conflict is crucial to keep other processes in motion and help the team handle issues before they arise. Moreover, motivation is always needed to induce cohesiveness, communication, and confidence. As noted earlier, behavioral integration requires collaboration among team members (Simsek

et al., 2005), effective management of interpersonal processes would likely improve collaboration among team members who might not necessarily share the same goals.

However, in the absence of these crucial processes, a lack of consistency in goals is not only going to deliver the antecedents for lack of effort but can also encourage antagonism and sabotage to the initiative. As such, in the absence of consistent goal configurations in the team, interpersonal processes gain added importance to move the initiative in the developmental pipeline.

Proposition 2b: In teams with high separation, effective management of interpersonal processes is crucial to move the initiative along the resource allocation process.

Propositions 2a and 2b indicate the difficulty of having high separation in the team and its effective management. High separation would suggest that in a specific initiative team there are individuals who are motivated – due to their personal range – to undertake the initiative as well as individuals with the opposite motivation. In such cases, handling the initiative requires both cognitive and behavioral processes; these actions, in fact, underlie what Hambrick (1994) identified as the behavioral and cognitive processes that separate a team from a group of individuals. As such, transition and interpersonal processes work in tandem. Proposition 2b suggests that controlling the interpersonal processes allows the initiative to move along – from one performance episode to another – in the resource allocation process. But interpersonal processes do not guarantee a decrease in separation, i.e. a coalescence of team members around a specific goal configuration. Interpersonal processes provide the groundwork for the team to effectively manage itself from one performance episode to the other but, transition processes, as

indicated by Proposition 2a, are the ones that can make sure that goals will be more consistent within the team, and only over time through multiple episodes.

The rest of the propositions relate to teams where there is low separation, i.e. teams where the personal ranges are similar. When there is low separation, the nature of the personal ranges that is indicated becomes more crucial as the personal ranges in the team are no longer distributed, but rather, concentrated on certain goal configurations. I distribute the nine-goal configurations to four groups where different team processes can be beneficial to move the initiative in the resource allocation process. These groups are the top-left quadrant of Table 1 where individual and departmental goals show alignment; bottom-right quadrant of Table 1 where there is misalignment; the center configuration showing indifference from both individual and departmental goals; and the off-diagonal configurations where the nature of alignment of initiative goals and individual and departmental goals are in conflict. In the following, I describe the crucial team processes for each group.

I begin with the case when there is low separation in the team and alignment between personal range and initiative goals. Located at the top-left quadrant of Table 1 and identified with bold lettering, these teams have alignment of initiative goals with individual and/or the departmental goals. These three configurations are combined together not because they all exhibit alignment but, rather importantly, these teams do not experience any misalignment with the initiative goal. This condition suggests there exists high motivation for the team members as there are significant incentives – for themselves, for their departments or both – to work towards the initiative goal. Scholars often note that organizations need control mechanisms to align individual and

organizational goals (Cardinal, Sitkin, & Long, 2004; Ouchi, 1980). The configuration described here is the exact opposite, when individual and departmental goals are aligned with the initiative goal. In this case, transition processes become operative as team success is more dependent on the appropriate identification and analysis of the tasks that need to be undertaken.

In this alignment condition, teams have enough motivation to undertake the work at hand, and there is minimal concern for negative activities hampering the initiative progress. The need, however, is a comprehensive analysis of the task at hand to make sure that groupthink is not at work (Janis, 1982). When team members share certain goals and, at the same time, lack norms for a comprehensive decision-making process, groupthink is more likely to develop endangering chances for success. Moreover, planning activities and comprehensiveness of decision-making help the formation of team mental models, which then improve implementation efforts (Mohammed, Ferzandi, & Hamilton, 2010; Thomas & Ambrosini, 2015). Along with heterogeneous information sets and cognitive structures, heterogeneous objectives is one of the core impediments that cause ineffectiveness in strategic problem formulation (Baer, Dirks, & Nickerson, 2013). When this impediment is removed, as is the case here, the rational elements that analyze and evaluate the task and its environment are central to achieving outcomes with high quality. As such, I argue that when there is low separation and alignment of goals in the team, transition processes gain added importance.

Proposition 3: When team member personal range and initiative goals are aligned with low separation, effective management of transition processes is crucial to move the initiative along the resource allocation process.

The next proposition relates to the opposite case of Proposition 3 – when there is misalignment in a team. In Table 1, these teams are located at the bottom-left corner, italicized, and characterized by having individual and/or departmental goals in conflict to the initiative goal. Under such misalignment, individuals will be facing a role conflict where they are expected to undertake work for an initiative that will potentially have negative consequences for themselves and/or their departments. In this case, I argue that action processes are more important to continue the development of the initiative.

Action processes refer to monitoring progress towards goals – tracing tasks towards their completion and systems monitoring – making sure that internal and external conditions and resources are tracked, and team monitoring and coordination – assisting team members and coordinating actions (Marks et al., 2001). These processes are required to keep track of the team actions: the initiative can be successful by controlling the team's progress towards an undesirable goal and encouraging them to coordinate their actions within the specific performance episode. As noted earlier, control systems are designed to align organizational and individual goals (Cardinal et al., 2004). Unlike earlier work which suggests different types of controls for different types of organizations (Ouchi, 1980), recent research suggests that different types of control systems are complementary (Cardinal et al., 2004; Kreutzer, Cardinal, Walter, & Lechner, 2016). Specifically, Kreutzer and coauthors (2015) show that organizational controls can be instrumental to overcome highly politicized environments – which tend to arise due to conflicting goals in the organization. They suggest that behavioral and output controls could be complementary to each other; behavioral controls work towards increasing cooperation and assistance among team members whereas output controls are easy to

implement “hands-off” means to track progress (Kreutzer et al., 2015). Both control mechanisms have their drawbacks but when implemented together they provide the maximum benefits, especially when the initiative team is operating under highly politicized environments. Action processes essentially control the work both through controlling outputs and behaviors: monitoring work towards the objectives and monitoring the way the work is done. Under such an environment, then, it could be expected that action processes make it more likely that the initiative will advance without experiencing serious impediments due to misaligned goals. Thus, I expect:

> *Proposition 4: When team member personal range and initiative goals are misaligned with low separation, effective management of action processes is crucial to move the initiative along the resource allocation process*.

I’ll now discuss the complete indifference case: when there is no alignment or misalignment within the personal range of team members and the initiative goal itself. This configuration is at the center of Table 1. In Propositions 3 and 4, I group indifferent alignment with alignment and misalignment cases. For example, when an initiative is indifferent towards departmental goals but aligned with individual goals, members of that initiative are characterized in the alignment group. The reason for this grouping is that, for both alignment and misalignment cases, the opposite motivation is lacking. In other words, neither individual nor departmental goals show any alignment in the misalignment group, and the opposite is true for the alignment case. However, complete indifference is a configuration that needs to be specifically addressed.

If the team members are in the center box, that suggests that they have no individual or departmental interest in the specific initiative that is being undertaken. One

can liken this to the concept of "zone of indifference" described by (Barnard, 1938). Barnard (1938) suggests that keeping employees in a zone of indifference is an executive function; a zone where organizational interests are satisfied, *and* the individual is not going to question the specific duties assigned to them. Under such a configuration, it is clear that the advancement of the initiative will depend upon the team members' willingness to work towards the initiative. To achieve such work, individuals might need to be encouraged and motivated to undertake the necessary work, and they need to be confident enough to positively work towards the initiative goal. In the absence of motivation from individual and departmental sources – i.e. goal motivations – an added boost is necessary to improve individuals work towards the initiative goal.

Moreover, it is crucial to preemptively manage emotions and conflict in such a team. Indifference towards initiative goals would not necessarily create an inherent negative affect or conflict, but mismanagement of these processes can induce future conflict and negative affect by creating vicious cycles over time (Jehn & Bendersky, 2003; Kozlowski & Bell, 2013; Marks et al., 2001). As such, interpersonal processes are crucial to initiative performance when team members show indifference towards the initiative goals.

Proposition 5: When team member personal range and initiative goals are indifferent with low separation, effective management of interpersonal processes is crucial to move the initiative along the resource allocation process.

Finally, I will examine the two off-diagonal cases, shaded in grey in Table 1, where there is low separation in the team, but the individual and departmental level goals

are in conflict with each other. In other words, in these configurations, when the individual goals are aligned with the initiative goals, the departmental goals are misaligned and vice-versa. In these configurations, I argue that one of the two goals (individual or departmental) will prove to be dominant and move the team to either the top-left or the bottom-right corners. The nature of this dominance will depend upon an organizational characteristic, specifically the level of individualism or collectivism in the organization.

Like societies, organizations have a culture that indicate shared norms, artifacts, procedures, and stated/unstated assumptions (Earley & Gibson, 1998). The extent to which organizational culture is collectivist or individualist has been found to be a significant point of variability in research (Triandis, 2001). This continuum refers to the extent to which a culture expects individuals to give priority towards their in-group goals and behave in a communal way (collectivist) as opposed to priority towards individual goals and behave in a way that stresses individual attitudes (individualist). Individualism-collectivism continuum has been an important characteristic of organizations that received significant interest from scholars (e.g. Brickson, 2005; Dierdorff, Bell, & Belohlav, 2011; Morris et al., 1993).

In this paper, I use this continuum to examine how teams in these configurations will behave. Specifically, I argue for three positions within the continuum: the extreme points where the organizational culture can be described as collectivist or individualist, and the more balanced neutral position. Under the extreme points, I argue that this aspect of the culture will dictate which goal, and its associated alignment condition, will be more dominant. For collectivist cultures, I expect the level of departmental goal

alignment to be more dominant. This indicates that if the departmental goals show alignment with the initiative goal, the team will behave similar to the alignment group in the top-left corner. However, if the departmental goals show misalignment, then the team will behave similar to the misalignment group in the bottom-left corner. Alternatively, if the organization is more individualistic, the opposite will be expected where the goal alignment of individual and the initiative will dictate whether the team moves towards the alignment or misalignment groups. These conditions are represented in Figure 6; the basic argument is that both off-diagonal configurations can behave similar to alignment or misalignment configurations. The deciding factor would be the extent to which their organization stresses collectivist versus individualist values.

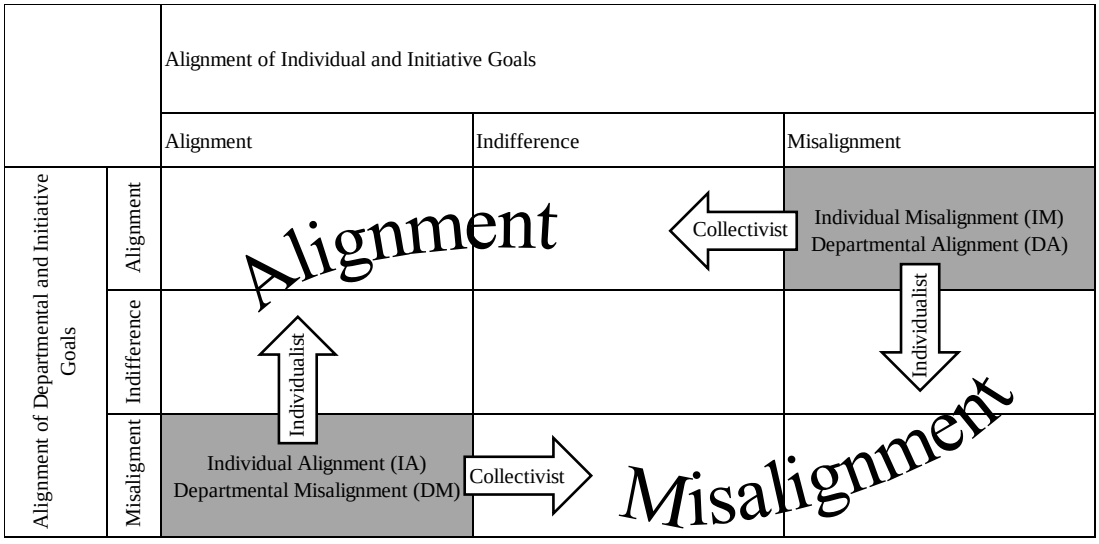


Figure 6: Goal Configurations with Conflicting Degrees of Alignment and their Movement with Organizational Culture

Individuals, regardless of the context, can show differences regarding their position on the individualism-collectivism continuum. However, when we discuss teams, composed of many individuals, then it is more likely that the team actions will show more fit with the organizational culture. In other words, while individuals in a specific

team might not always fit with the level of collectivism within the organization, it is likely that the team context will be influenced by organizational norms (Connaughton & Shuffler, 2007; Kozlowski & Bell, 2013). Organizational cultures can be described as collectivist and individualistic (Earley & Gibson, 1998) and individuals in organizations which stress collectivism behave more cooperatively (Chatman & Spataro, 2005), perform organizational citizenship behaviors (Moorman & Blakely, 1995) and respond better to group goals as opposed to individual goals (Earley & Gibson, 1998). Overall, the level of individualism/collectivism in the organizational culture can tip the balance of opposing goals relating to individual and departmental goals into one way or another. Thus,

> *Proposition 6a: When individual and departmental goals exhibit contradicting levels of alignment within a strategic initiative team with low separation; departmental goals will dominate in collectivist organizations and individual goals will dominate in individualistic organizations.*

Proposition 6a suggests that when team members are faced with contradicting goals, the deciding factor of which of these positions will be dominant will depend on the organizational context. For example, if individual goals align with the initiative goals whereas departmental goals misalign, in collectivist organizations, the misalignment of departmental goals will be the overriding factor, and as such I expect them to behave similar to the bottom-right corner teams in Table 1. Consequently, this would mean that the team process that gains added importance would be the action processes. This is due to the fact that bottom-right corner teams exhibit general misalignment with initiative

goals. Conversely, in an individualistic organization, the above example team would likely behave similar to alignment configurations when transition processes are likely to be more crucial.

Proposition 6a only addresses the instances where an organization is placed along the extreme points of the continuum of collectivism-individualism. In other words, Proposition 6a relates to initiative teams that are located in organizations that can be identified as collectivist or individualist. However, if this contingency factor is taken as a continuum, then the balanced or the neutral case should also be discussed. When an organization's culture does not necessarily incorporate elements and encourage norms regarding self vs. group behaviors in a substantial manner, it is unlikely that this characteristic would be important in determining whether a team will act towards a specific alignment or misalignment. It could be suggested, however, when there are both incentives and disincentives towards successful completion of the initiative goals, the overriding team process that would be crucial would be interpersonal processes. Similar to the indifference configuration, the avoidance of the detrimental effects that can come about in this configuration might be more important and crucial than providing any additional benefits. When faced with mixed expectations and demands, motivation, conflict and affect management might be the only preemptive efforts to keep the job going on (Huy, 2002). Hence:

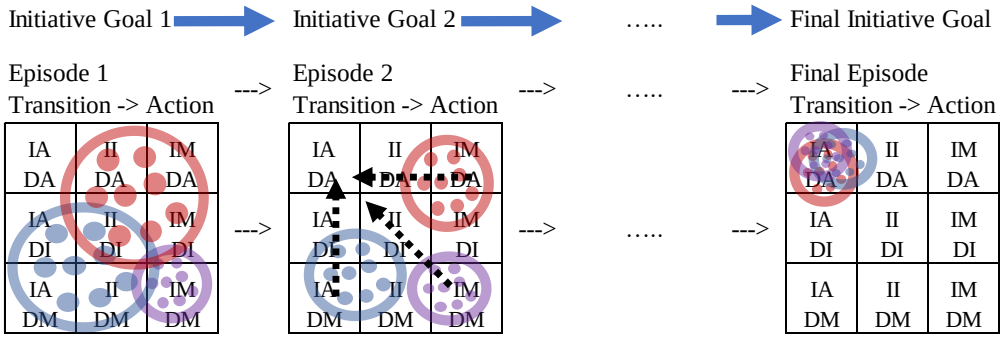
> *Proposition 6b: When individual and departmental goals exhibit contradicting levels of alignment within a strategic initiative team with low separation, and organizational culture is neutral in the individualist-*

collectivist continuum, effective management of interpersonal processes is crucial to move the initiative along the resource allocation process.

Having discussed the relationship between goal configurations in strategic initiative teams and the team processes that enable their effective management, I will develop the theory on the movement of the initiative in the resource allocation process. The above propositions, identifying crucial team processes for different goal configurations, are focused on a single episode. As noted earlier, the approach of seeing team effectiveness through input-process-output (I-P-O) models has to be augmented to integrate the temporal nature of teamwork, and the episodic framework that views work-teams through successive episodes of I-P-Os gained a large traction in recent literature (Mathieu et al., 2017; Mathieu, Maynard, Rapp, & Gilson, 2008).

The extent to which goals are aligned within the team, and the corresponding level of separation among team members, can be seen as emergent states within the interactions of strategic initiative teams. Strategic initiatives operate under dynamic environments (Friesl & Kwon, 2017; Huy, Corley, & Kraatz, 2014; Noda & Bower, 1996); the organizational context and the goals of the initiative can change due to the uncertain and novel task the initiative is attempting. As such, the initiative goal and the corresponding alignment of individual and departmental goals do not necessarily remain constant, rather emerge as the initiative is shaped over time. This development of the initiative over time is illustrated in Figure 7. In any given episode, the personal ranges of goals of team members can be consistently in one of the nine configurations, or alternatively, be inconsistent in their separation. This separation will depend on the initiative goal at hand.

As the initiative develops, the initiative goal and corresponding personal range and consistency will shift. However, these shifts will likely be related: for example, specific departmental goals do not necessarily change quickly, and if there is no significant alteration in the initiative goal between episodes, the extent to which departmental goal alignment impacts personal ranges will be minimal. But, it is likely that alignment and consistency will both improve over time: I will discuss this movement of the initiative in the resource allocation process and its effects on goal alignment in the following pages.



Note that each circle repsents a sample team with different goal configurations and degrees of separation

Figure 7: Development of Initiative and Shifting Goals over Time

With proposition 2a, I argued that the separation of personal range of goals within the initiative team can be decreased with the effective use of transition processes. I noted, however, this decrease in separation cannot happen over a single episode. In my final proposition, I extend this argument to teams with consistent goal configurations around different levels of alignment. Specifically, I argue that movement in the resource allocation process, which indicates experiencing multiple successive performance episodes, will increase goal alignment within the team, as shown in Figure 5.

The basic tenet of this proposition is that the continued development of the initiative will improve alignment over time. I begin by noting the antecedent condition – continued development in the resource allocation process – suggests that the initiative is seen as a high performer in the organization. An initiative that consistently fails would not be advanced in the resource allocation process; rather, initiatives that advance would either be reliably meeting expectations and demands or would be perceived as having the *likelihood* of meeting these expectations and demands in the future. In other words, movement in the resource allocation process indicates that either 1) the initiative is meeting expectations and demands, or 2) faced with negative performance, the initiative is being kept going because of future expectations of high performance.

The first possibility is the case when the initiative is meeting expectations and demands. This would indicate that the team is successful within the intraorganizational environment based on the rules that constitute the structural context. Researchers argued that team collective efficacy and potency improves team performance (Gully, Joshi, Incalcaterra, & Beaubien, 2002; Kozlowski & Bell, 2013) but this relationship is also reciprocal in that past performance also helps improve efficacy (Chen, Kanfer, DeShon, Mathieu, & Kozlowski, 2009; Park, Spitzmuller, & DeShon, 2013). In other words. when the initiative team is performing well, this positive feedback will help increase the collective belief among members that the team could successfully achieve the task it set out to do. Moreover increases in collective efficacy in-turn increases self-efficacy (Chen et al., 2009). Literature has shown that factors such as self-efficacy and potency increase team empowerment which is positively associated with team and organizational commitment (Kirkman & Rosen, 1999).

The second possibility is the case when the initiative is not meeting expectations but continues to move in the resource allocation process. I argue that this movement in the resource allocation process can lead to the phenomenon called escalation of commitment. Escalation of commitment is defined as commitment to a course of action despite negative feedback (Sleesman et al., 2012; Sleesman, Lennard, McNamara, & Conlon, 2018; Staw, 1981). Specific to the current context, research shows that groups that see positive results – such as advancement of the initiative – can develop optimism traps where team members essentially develop biased information filters that tend to minimize negative information in favor of positive information (van Oorschot et al., 2013). This phenomenon is more likely to happen under dynamic environments such as strategic initiatives. Such filters that "hide" certain types of information can lead to collective blind spots that then further increase commitment to failing courses of action (Fotaki & Hyde, 2015).

As can be seen from the above discussion, whether the initiative is achieving its external performance demands or not, its movement in the resource allocation process can increase commitment in the team. This increase comes either as increased commitment to a certain course of action, or increased commitment to the team and other group members. In other words, movement of the initiative will increase individual perceptions of collective success and ability, and this will create an added commitment to the process in general. Moreover, according to behavioral theory (Cyert & March, 1963; Gavetti et al., 2012), individuals, groups, and organizations initiate search for alternatives, change course, and undertake risky behaviors when their performance drops below aspirations (Jordan & Audia, 2012). As the initiative is meeting, and potentially

exceeding, performance expectations, one would not expect teams to undertake new courses of action.

Overall then, the vested effort put into the initiative, coupled with added commitment, will increase the alignment of individual goals with initiative success as opposed to triggering risky search and change in existing configurations. As large-scale and potentially irreversible projects, strategic initiatives exhibit high levels of interdependence both within the initiative team and across organizational units and departments (Lechner & Kreutzer, 2010a). Such intraorganizational interdependence increases commitment from different departments to already existing courses of action (Sleesman et al., 2018). Especially when departments with competing interests agree on a certain course of action, the escalation is assured (Guler, 2007).

Combining the above arguments, I contend that initiative success in the resource allocation process will help resolve contradicting goal positions within the initiative team and move the initiative towards the alignment configurations. At the individual level, increased commitment to the team and the process can help increase the alignment of individual goals with the strategic initiative objectives. At the departmental level, while the overarching goals might not necessarily align, the commitment towards the initiative will increase and the potential pitfalls from misalignment will be neutralized. Thus, I argue that when looked at as a whole, the alignment of personal ranges will improve over time as the initiative advances in the allocation process.

Proposition 7: Movement along the resource allocation process in successive performance episodes will increase goal alignment within the team.

Discussion and Conclusions

This paper investigates the nature of goal heterogeneity in strategic initiative teams. I argue that the initiative team can either be homogeneous or heterogeneous in its members' own alignment with the initiative goals and this diversity can have an impact on performance. Moreover, the type of homogeneity – i.e. the specific type of goal configuration that is dominant across team members – has implications for how best to manage the team. Overall, the theorizing presented here argues that multilevel goals have a significant impact on the success of a strategic initiative and the nature of these goals demand efficient management of team processes. In other words, alignment of multilevel goals across team members could be just as detrimental as misalignment; the team is required to effectively manage either extreme or any point in between. There are several contributions and implications of these arguments for research and practice.

The broad contribution of this paper is to consider goals through multilevel and temporal perspective. The body of literature that investigates strategic initiatives largely takes the initiative team as a cohesive unit and consider its relationships with the rest of the organization (e.g. Kreutzer et al., 2016; Lechner & Floyd, 2012; Markham, 2000; McGrath, 2001). However, the goal heterogeneity that is represented within these temporary and cross-functional teams is largely missing in the literature. Given the goal configurations discussed here, it is unlikely that such a unitary view of the strategic initiative team is appropriate. For example, research on social networks of strategic initiative teams (e.g. Kijkuit & van den Ende, 2010; Lechner et al., 2010; Pappas & Wooldridge, 2007) suggest that connected teams can influence and gain support from intraorganizational actors. However, while larger entities such as teams or organizations

can be tied to one another, they are constituted of groups of individual actors (Carpenter, Li, & Jiang, 2012). This realization begs the question, does the initiative team's tie to the influential actors in the organization stem from a specific team member whose goals are aligned with the rest of the team? If the specific team member is not aligned with the rest of the initiative team, it is unlikely that this member's connections can help the strategic initiative. This is just one example that provides the fallacy of assuming a cohesive team, especially when goals are discussed.

On the other hand, research that provides insights about the heterogeneity of goals are largely qualitative studies (e.g. Burgelman, 1983b, 1991; Huy et al., 2014; Mirabeau & Maguire, 2014) that do not engage the topic with a comprehensive perspective on the entirety of the separation and alignment spectrum. To my knowledge, this paper is the first to integrate different levels of goals in strategic initiatives and that attempts to identify their management, over time, from a team process perspective. The arguments presented here are both comprehensive and parsimonious for empirical investigations. Survey methodologies have been used to measure and validate team processes discussed in this paper (LePine et al., 2008) and the typology of goal configurations represented in the personal ranges, and the extent to which they are shared among team members, can easily be quantified. While it might be challenging to analyze all possible cases represented here in a single empirical study, the propositions offered in this study leads directly to their empirical investigation.

Another contribution of this paper is to the larger management literature by exploring goal alignment at different levels. Goal congruence received interest in the literature but it remained at dyadic levels (e.g. Kristof-Brown & Stevens, 2001; Nauta &

Sanders, 2001; Vancouver & Schmitt, 1991) without linking the alignment of individual, team and the intraorganizational goals (Maloney et al., 2016). The typology created shows that different types of personal ranges are possible and, more importantly, they require management of separate team processes for initiative success. As such, this argumentation shows that not contextualizing the team within its intraorganizational environment potentially misses added nuances of how team processes can be beneficial or detrimental for team outcomes.

More broadly, the theory presented here relates to the issue of homogeneity and heterogeneity of goals represented in the team. In general, diversity in teams is seen as a double-edged sword (Srikanth et al., 2016; Tasheva & Hillman, 2018); increased diversity provides creative and informational benefits while decreasing cohesion and information exchange. The discussion presented here highlights the fact that when the type of diversity is goals, there is a need for homogeneity to address the specific alignment or misalignment cases. As Srikanth and co-authors note the extant research on team diversity is "bounded by the assumption that group members come together with the intention of working together cooperatively to achieve a task" (2016, p. 483). If the personal ranges represented in the team are highly diverse and show no similarity across team members, there are limited ways to address this issue within the team, short of *re*aligning interests across individuals and departments by *re*negotiating goals. Still, propositions 2a and 2b suggest team processes that can help the heterogeneous teams move forward and potentially become more homogeneous over time. These two propositions show that when a strategic initiative is faced with multiple, competing, goal orientations, the basis for moving in the resource allocation process for essentially

depends on whether the strategic initiative team can behave as a team (Hambrick, 1994; Simsek et al., 2005). Contrarily, if there is low separation among team members, whatever the type, the team processes can address the impact of multilevel goal heterogeneity in strategic initiatives somewhat more easily.

The above argument implies that a degree of process awareness is required in the team. Effective management of the three types of team processes discussed here, all require team members, and leaders to think, evaluate and address their actions (Mathieu et al., 2017). The literature has taken a process perspective in understanding how strategic initiatives are developed within the organizational context (McGrath et al., 1995) and team processes are seen as important mediators in strategic initiative outcomes (Klotz, Hmieleski, Bradley, & Busenitz, 2014). If the team is aware of these processes, their effective management will be possible. Strategic initiatives are cross-functional teams, but they do have supervising managers, within and outside of the team rosters. Literature argues that effective strategic initiative team leaders influence transition, action, and interpersonal processes, helping team members develop plans, manage objectives and solve conflicts (Jassawalla & Sashittal, 2000). However, team member recognition of these processes can also help overcome goal differences – whatever the source.

Note the above implication assumes that these differences in goals are not the result of malicious intent. This forms a boundary condition to the theory presented here as malicious intent that arises from hidden agendas can be uncontrollable in the strategic initiative settings and typically are the cause of political behavior that harms initiative outcomes as well as interpersonal relationships within the initiative team (Hitt et al., 1999; Kreutzer et al., 2015). Antagonists can improve strategic initiative performance as

devils' advocates (Markham, 2000) but this requires active opposition in a way that reveals one's position towards the initiative goals. If the team members have hidden goals, they are more likely to hinder communication and cooperation and be unresponsive towards team demands (e.g. Guth & MacMillan, 1986; Huy et al., 2014; Ybema & Horvers, 2017). But, even under such extreme conditions, team processes discussed here can help thwart and minimize such sabotage. Action processes that focus on control and coordination can help overcome hidden motives of individuals associated with the strategic initiative. However, lack of a process focus will likely be detrimental under alignment, misalignment or indifference.

The final implication relates to the temporal development of the strategic initiative and the alignment of goals. The perspective presented here argues that goal alignment, goal separation, and performance go hand-in-hand. The theoretical arguments posited note that as the initiative moves in the resource allocation process, the separation in personal ranges represented in the team should minimize, and personal ranges should move towards the alignment configuration. The theoretical argument rests on the fact that both individuals' and departments' vested interest increases with the initiative's development over time. Note that this argument does not depend on whether the initiative is objectively successful; both successful and unsuccessful, with future expectancy, initiatives can present this outcome at the team level.

When the initiative is successful this improved alignment is neither worrying nor surprising. The opposite case though suggests a cross-level interaction between an intraorganizational decision – i.e. the advancement in the resource allocation process – and an emergent characteristic at the team level – i.e. the level of goal alignment in the

team. Literature identified information filters and cognitive biases (van Oorschot et al., 2013) and groupthink (Janis, 1982) as potential sources of escalation of commitment at the team level (Sleesman et al., 2018). The arguments presented here might suggest a cycle; when the organizational leaders reapprove and fund an initiative in the organization, that could, in turn, increase the alignment of goals within the strategic initiative team. However, the very arguments posited in this paper suggest that alignment of goals would likely induce such biases from resulting information filters and groupthink to emerge unless the transition team processes are carefully managed. The extent to which these team processes are managed will define whether the cycle experienced is a vicious or a virtuous one.

There are several limitations to the arguments presented here, some of which have already been alluded to. First, the arguments presented puts the onus of team process management mainly on the team members. However, as strategic initiatives are composed of members across the hierarchy, such 'democratic' control over the team process is not necessarily possible. I noted the role external supervisors play, but the argumentation provided does not give an answer to how these team processes will be managed directly. Second, the theory presented applies to initiatives that have received an initial mandate. The actions undertaken before the initial mandate, such as issue selling for this very purpose, will create certain levels of goal alignment while populating some of the team roles by interested individuals. My arguments neither considers such previous activity nor investigates why individuals and departments are assigned to the initiative in the first place. While team process implications are unlikely to change due to these considerations, the rate of change of alignment and separation can be impacted by

individuals' initial stance towards the strategic initiative. Third, building upon the membership issue presented above, the arguments put forth assumes that team roster would be constant over time. However, strategic initiatives do not necessarily retain their members through the entire developmental process – either due to personnel movement within and across organizations, or the need for specific types of human capital at a given stage if the process. As team membership changes, the set of personal ranges represented in the team would also likely change. However, the conceptualization includes the indifference cases and it is likely that changes in team memberships towards the later stages of the strategic initiative would more likely involve human capital with technical expertise and more frequently at an indifferent stance towards the initiative as opposed to aligned or misaligned cases. Finally, the argumentation put forth regarding propositions 6a and 6b suggests that organizational culture can dictate team actions. While organizational culture indeed influences team contexts, teams also build their own norms and values over time (Kozlowski & Bell, 2013) and such norms would be likely to influence team actions when team members have conflicting goal alignment with low separation. However, the answer to this question lies in a more extensive consideration of the team and individual characteristics besides the multilevel goals considered here; one example consideration could be the extent to which team members identify with the organization (Tarakci et al., 2018). As such, this limitation is out of the scope of this paper, but it is worthy to be studied in the future.

Above limitations aside, this paper contributes to the literature by providing a comprehensive look into goal heterogeneity in strategic initiative teams. Strategic initiatives fail at a very high rate (Walter et al., 2016) and there is a growing body of

literature that argues for the use of strategic initiatives as the unit of analysis in strategy research as well as investigating factors that impact their success (e.g. Burgelman, 1991; Canales, 2015; Lechner & Floyd, 2012). This paper contributes to these calls by incorporating goals and team processes and their impact into strategic initiative development through a multilevel and temporal perspective. I hope these arguments will lead to more empirical investigations of this topic.

CHAPTER 4

A TEMPORAL INVESTIGATION OF TASK CONFLICT AND COMPLEXITY FOR STRATEGIC INITIATIVES

Strategic initiatives are temporary group undertakings intending to add or renew organizational capabilities (Lechner & Floyd, 2012; Lechner & Kreutzer, 2010a) and form the basis for organizational strategy (Lechner & Kreutzer, 2010a; Nag et al., 2007; Walter et al., 2016). Strategic initiatives take the form of projects for developing new products, processes, and markets and are formulated within the intraorganizational ecology (Burgelman, 1991; Lovas & Ghoshal, 2000) by cross-functional teams. Despite their importance for organizational strategy and performance, recent reports suggest that initiative development is a challenging process with failure rates exceeding 70% (CGMA, 2016; Walter et al., 2016).

One reason for such high failures is the complexity of the task at hand. While there is no dominant definition of the concept, both early and recent conceptualizations of complexity depend upon several factors relating to task characteristics such as the number of distinct task components to be undertaken, the difficulty of those components to be completed based on available information, the number of potential paths to be taken, the outcomes of those paths, and the probabilistic interdependence among different paths and outcomes (Campbell, 1988; Hærem et al., 2015; Wood, 1986). Complexity is an important factor for organizational decision-making and it plays an important role in the development of strategic initiatives. For example, different boundary structures between groups might be required to transfer knowledge of varying complexity (Zhao & Anand, 2013); the effectiveness of goal-setting could be dependent upon the complexity

of the task at hand (Locke & Latham, 2002; Nahrgang et al., 2013); and complexity might constrain the variety of actions such as organizational adaptation (Burgelman & Grove, 2007; Martin & Eisenhardt, 2010) or intending to be customer-focused (Ethiraj et al., 2012).

Despite the importance of strategic initiatives, complexity of the initiative task itself has not garnered enough attention. The complex nature of the strategic initiative formation is observed in qualitative studies (e.g. Klingebiel & De Meyer, 2013; Mirabeau & Maguire, 2014), but a detailed look into the complexity of strategic initiatives is lacking in the literature. This could partly be due to the fact that the literature at large approaches complexity as an objective characteristic of the strategic initiative as a task, where a-priori decisions regarding the complexity of the task context is dominant. Many researchers conclude that a team is undertaking a complex task simply based on definitional characteristics of task complexity (Bradley et al., 2015; Espinosa, Slaughter, Kraut, & Herbsleb, 2007; Jehn, Northcraft, & Neale, 1999; Kleingeld, Van Mierlo, & Arends, 2011; Vashdi, Bamberger, & Erez, 2013). However, Hærem and colleagues (2015) argue that seeing complexity through such a lens is flawed and that task complexity is interdependent with the people, the task environment as well as time.

I build upon this characterization by Hærem and colleagues (2015) and attempt to bring a temporal perspective of task complexity over the life cycle of a strategic initiative. I further contend that such a characterization can have significant effects on how research within this domain is undertaken. Specifically, in order to show the effects of viewing complexity with a temporal lens, I explore the interaction between task complexity and intrateam conflict. This approach is highly relevant for strategic

initiatives – intrateam processes play a significant role in team outcomes (Kozlowski & Bell, 2013), and in strategic initiative teams where individual members represent different departments and interests, effective team processes are likely to be crucial in determining team performance (Kownatzki, Walter, Floyd, & Lechner, 2013; Lê & Jarzabkowski, 2015; Mortensen & Gardner, 2017).

Conflict has been a part of discussions surrounding management and organizations for a long time (e.g. Barnard, 1938; Follett, Urwick, & Metcalf, 1941). While early research focused mostly on resolving conflicts, other researchers identify conflict as an important phenomenon that could "lead to innovation and change" (Litterer, 1966, p. 180) and proposing conflicts to be functional or dysfunctional (Amason, 1996). Jehn (1995, 1997) offered a typology of such functional and dysfunctional conflicts for intrateam contexts, classifying conflict according to its content regarding tasks, interpersonal relationships and the process of doing the work. This research stream identified types of conflict and investigated its outcomes (Amason, 1996; Jehn, 1995; Jehn & Mannix, 2001), but more recent investigations have shown that links between conflict types and expected outcomes are more complex than initially thought (Bradley et al., 2015; De Dreu & Weingart, 2003; de Wit, Greer, & Jehn, 2012; DeChurch, Mesmer-Magnus, & Doty, 2013). Specifically, many researchers fail to find the positive impact of the functional type of conflict, task conflict, on performance (De Dreu & Weingart, 2003), and as a result, researchers are calling for a contingency approach when studying team conflict (Jehn & Bendersky, 2003; Kellermanns, Floyd, Pearson, & Spencer, 2008), investigating the moderating variables (de Wit et al., 2012) as

well as the temporal issues that surround team behaviors (Bradley et al., 2015; Kozlowski & Bell, 2013; Loughry & Amason, 2014).

Thus, this paper brings together these two fundamental concepts concerning strategic initiatives: task complexity and intrateam conflict. Arguments relating to the potential positive impact of conflict on performance is based upon the notion that multiple perspectives, opinions, and debate stemming from conflict can provide alternative, and potentially better, solutions to the tasks at hand and thus improve performance. This positive impact is argued to have an influence when teams are undertaking complex tasks which are characterized by numerous, potentially uncertain alternatives and paths leading to multiple outcomes (Bradley et al., 2015; de Wit et al., 2012; O'Neill, Allen, & Hastings, 2013). Note, however, that none of the findings in the literature that investigate conflict-performance relationships are based on an empirical investigation of task complexity; rather, the investigated contexts are assumed to be complex or simple.

While there is evidence that task complexity is an important factor in the conflict-performance relationship, I argue that this potential positive impact is time-dependent. The central argument in this paper is that the overall task undertaken by a strategic initiative team has its highest complexity at the early stages of the team's life cycle. This implies that task conflict can be most helpful at this stage as the team faces a significant number of paths to multiple outcomes under uncertainty. However, increases in task conflict in later periods of the decision-making life cycle will not positively impact team performance. Initiative teams that maintain high levels of task conflict, while complexity reduces, should not experience a benefit from such conflict as it could interfere with

effective teamwork and, moreover, induce other types of conflict in the team (de Wit et al., 2013; Mooney, Holahan, & Amason, 2007).

I test these hypotheses using a sample of students enrolled in multiple sections of a senior-level business strategy course, undertaking a business simulation exercise over six weeks. Findings from the longitudinal study largely support these theoretical expectations. Results show that task complexity indeed decreases over time, even after taking team task proficiency into account. Operationalizing team performance through objective and subjective measures, I find that early task conflict positively impacts future team performance as measured by financial metrics. There is also evidence that increases in task conflict during the later periods of the project negatively impact team performance – increasing levels of task conflict does not help financial performance but has a negative impact on subjective perceptions of team performance.

This research makes several contributions. Strategic initiative task contexts have largely been studied largely through the extent to which they are exploratory or divergent (e.g. Kreutzer et al., 2016; Lechner et al., 2010; McGrath, 2001; Walter et al., 2016), and most conceptualizations of task complexity in the literature ignored a dynamic perspective and made assumptions based on categorizations of task environment (Hærem et al., 2015). I contribute to the stream of research on strategic initiative teams (e.g. Kreutzer et al., 2015; Lechner & Floyd, 2012; McGrath, 2001) by bringing a dynamic view to the strategic initiative task context. Specifically, I show that complexity is time-dependent and that such dependency must be considered in theoretical and empirical research rather than relying on the classification of tasks independent of their temporal context. Early on, Wood (1986, p. 71) noted that, as opposed to static complex tasks, for

"dynamically complex tasks, the parameter values for the relationships between task inputs and products are nonstationary." I show that *all* strategic initiative tasks are dynamically complex in that the relationships between inputs and products are not stationary but changing over time. Moreover, I contribute to the literature by providing a fine-grained look at the interrelationship of complexity, conflict, and performance in strategic initiatives, showing that the potential positive impact of task conflict is time-dependent (Bradley et al., 2015; Loughry & Amason, 2014). As such, this paper brings in temporality into the elaboration of team task and processes, answering a shortcoming oft-made for team-based research (Kozlowski & Bell, 2013; Mitchell & James, 2001) and provides an important explanation into why task conflict does not always have the positive outcome associations as it was initially theorized.

Theoretical Background

Strategic Initiatives

Strategic initiatives are temporary group undertakings that have the potential to add, renew and alter organizational capabilities and impact organizational performance (Lechner & Floyd, 2012; Lechner & Kreutzer, 2010a; Walter et al., 2016). Strategic initiatives can be deliberate or emergent (Mintzberg & Waters, 1985), autonomous or induced (Burgelman, 1983a), or exploratory or exploitative (March, 1991), but they form the basis for strategy formation in an organization (Lovas & Ghoshal, 2000; Noda & Bower, 1996). They can take on many forms such as initiatives relating to new product development (Danneels, 2002; Leonard-Barton, 1992), capital investment (Maritan, 2001; Thomas III & Waring, 1999), revenue growth (e.g. Kreutzer, Walter, & Cardinal,

2015; Lechner & Kreutzer, 2010b), operational improvement (Lechner & Floyd, 2012) or new business development (Burgelman, 1991; Shi & Prescott, 2012).

Literature on strategic initiatives is diverse due to the variety of perspectives used to investigate such projects. Much of the literature focused on the intraorganizational processes in which strategic initiatives are developed (Burgelman, 1991; Lovas & Ghoshal, 2000; Noda & Bower, 1996), the champions and middle managers who undertake them (Dutton et al., 1997; Heinze & Weber, 2016; Huy, 2002; Pappas & Wooldridge, 2007), group-level activities that surrounds strategic initiatives (Lechner & Floyd, 2012; Lechner et al., 2010; Taylor, 2010), as well as the intra-team processes that impact initiative outcomes (Ancona & Caldwell, 1992a; Klingebiel & De Meyer, 2013; Lê & Jarzabkowski, 2015; Walter et al., 2016).

Strategic initiative team tasks have garnered some interest, especially the degree to which a strategic initiative is exploratory with respect to organizational capabilities has been a focus for a variety of theoretical arguments. Intra-organizational coalition building activities are more beneficial for exploratory initiatives (Lechner & Floyd, 2012) as more incremental initiatives tend to be less politicized and follow a more rational decision-making process (Maritan, 2001). Complexity of the knowledge being created in the strategic initiative is related to the level of exploration in a strategic initiative. Sykes (1986) argues that initiatives that require high levels of research and development are more difficult to implement. Highly exploratory initiatives require more knowledge integration from different organizational units into the strategic initiative team (Schmickl & Kieser, 2008), and such knowledge can be costly to acquire (Hansen et al., 2005). The strength of social ties between team members and the rest of the organization play an

instrumental role in gaining this knowledge (Hansen, 1999; Schulze & Hoegl, 2006). Within the team itself, exploratory content of the initiative impacts the potential benefits from initiative level learning: Walter and coauthors (2016) find that initiative performance improves from intra-group learning activities when the initiative content is exploratory and exploratory initiatives benefit more from goal autonomy when learning is considered as an outcome (McGrath, 2001). This focus on exploratory initiatives show the difficulties of implementing such capability-building projects; there are a number of works that find the degree of exploration to be negatively associated with initiative performance (Kreutzer et al., 2016; Lechner & Floyd, 2012; Walter et al., 2016). This difficulty can be associated with the increased potential complexity of undertaking exploration: for an exploratory initiative, the market, technologies, and processes might all be new to the organizational context creating significant challenges and uncertainty (Florén & Frishammar, 2012).

Overall, the literature's main focus has been the degree to which an initiative is exploratory as an explanation of the added challenges that might be caused by increased complexity. However, strategic initiatives of any type could be characterized as a complex undertaking, and the challenges it represents can be seen in the vast qualitative work that has investigated strategic initiative formation (e.g. Burgelman, 1991, 1994; Klingebiel & De Meyer, 2013; Lovas & Ghoshal, 2000; Noda & Bower, 1996). Despite this body of research, the literature lacks a quantitative and temporal approach investigating the complexity of the work that is being done.

In the next section, I will discuss the research on intrateam conflict at large and as well as the theoretical approach to task complexity in the literature. I will then integrate

these literatures to investigate the effects of complexity over time and its impact on intrateam conflict.

Intrateam Conflict and Task Complexity

Conflict has received a lot of interest since management scholars first started writing about social interaction in decision-making. In the early 1990s a typology emerged suggesting that conflict over task issues and debates about outcomes could be beneficial to team decision-making and thus defined task conflict (also called functional or cognitive conflict) as "disagreement about the content and issues of the task" (Jehn, 1995; Jehn & Bendersky, 2003: 200). A second type, relationship conflict (also called dysfunctional, affective or emotional conflict), is attributed to interpersonal incompatibility and includes tension, dislike, annoyance and animosity among the group members (Jehn, 1995; Jehn & Bendersky, 2003). This type of conflict increases hostility and has been argued to negatively impact decision-making processes, group unity, and performance. Finally process conflict, which relates to the process in which a task is to be performed, also is believed to negatively influence team outcomes because it "pertains to issues of duty and resource delegation" between group members (Jehn & Mannix, 2001, p. 239) which could eventually create personal animosity within the team. While these conflict types are theoretically distinct, they frequently occur together, and research suggests that increased task and process conflict triggers relationship conflict (Jehn & Bendersky, 2003; Loughry & Amason, 2014). In this project, my interest is on the drivers of team performance, and task conflict is the dimension of this typology that is argued to have a beneficial impact. As such, I focus on task conflict.

Conflict types have received significant interest from researchers; although theoretical arguments remain essentially identical to the original conceptualizations, empirical results diverge. To address these conflicting findings, several meta-analyses investigate the conflict-performance relationship. One finding that all studies converge on is the negative impact of relationship and process conflict on performance. With respect to task conflict, an early study by De Dreu and Weingart (2003) found a negative impact on performance outcomes as well, stemming a stream of research that focused on minimizing all types of conflict regardless of type. However, recent large sample studies (de Wit et al., 2012; DeChurch et al., 2013; O'Neill et al., 2013) show that task conflict-performance relationships are more complicated than either the early theorizing or the findings of the meta-analysis by De Dreu and Weingart (2003).

Two of the recent meta-analyses find no significant impact of task conflict on group performance (de Wit et al., 2012; DeChurch et al., 2013). However, in their meta-analytic regression analysis, DeChurch and colleagues show that controlling for relationship conflict, task conflict has a positive impact on team performance. Moreover, all three of the recent meta-analyses recommend focusing on understanding the contingency effects of moderators on task conflict-performance outcomes. For example, De Wit and colleagues (2012) find that in studies where the sample was top management teams, task conflict had a positive impact on team performance. O'Neill and colleagues (2013) find that for decision-making teams task conflict-performance relationship was strictly positive. Both of these studies showed that the findings relating to the impact of task conflict on team performance also depended upon the measurement of the outcome variable; when measured objectively (O'Neill et al., 2013), or financially (de Wit et al.,

2012), task conflict was associated with positive outcomes. Thus, while results show that task conflict does not always improve performance, they also point to the need for addressing the contingent effects in which task conflict could be beneficial.

One such contingency is time. The main reason for a temporal investigation of conflict is that teamwork is not just about decision-making but also about the implementation of such decisions; while conflict might have some benefits, in the long-run there needs to be consensus and unity among the group members for effective implementation (Amason, 1996; Jehn & Mannix, 2001). Moreover, it is possible for teams to fall into conflict spirals where past conflict could negatively impact performance which then fuels more conflict within the team (O'Neill et al., 2013; Peterson & Behfar, 2003).

Few studies have addressed the issue of time when conflict occurs and its impact on outcomes (e.g. Farh, Lee, & Farh, 2010; Jehn & Mannix, 2001). Jehn and Mannix (2001) investigated conflict over time and found that high performing teams had lower conflict over the team's life cycle but had higher task conflict in the middle, supporting the punctuated equilibrium model proposed by Gersick (1988). More recently, Farh and colleagues (2010) investigated the impact of task conflict on team creativity in their cross-sectional study and found that teams that had moderate task conflict at early stages of their tasks had higher creativity. Others investigate the impacts of early conflict on later outcomes. For example, Peterson and Behfar (2003) show that both task and relationship conflict within a team is dynamic in nature and that past conflict impacts future conflicts within a team. Tekleab and his coauthors (2009) investigate the impact of early conflict on team cohesion and team performance and the moderating role of conflict

management during the team's life cycle. Jehn, Rispens, Jonsen, and Greer (2013) conceptually examined how dyadic conflicts in a team spreads to the entire team over time. Taken together, these papers do not provide a definitive answer to how temporal dynamics play a role in conflict-performance relationship and aside from such papers, the temporality of team behaviors – including team conflict – continues to be an under-researched area requiring significant attention (Bradley et al., 2015; de Wit et al., 2012; Kozlowski & Bell, 2013).

Another contingency is the nature of the task at hand. In her seminal paper, Jehn (1995) argued that the impact of task conflict on team performance depends on the extent to which the team is undertaking non-routine work. Under routine work, task conflict proved to have negative performance impact whereas in non-routine work, teams benefitted from task conflict both at the individual and group levels. Despite this finding, recent meta-analytic results show mixed support for the argument that team task type could impact how the conflict-performance relationship plays out. De Dreu and Weingart (2003) reported mainly negative results across all types of tasks. In contrast, de Wit and coauthors (2012) find that in studies employing data collected from top management teams or from teams undertaking decision-making tasks, task conflict had a positive impact on outcomes. O'Neill and colleagues (2013) also find support for the moderating role of task type; their findings, show that task conflict has a positive impact on performance when the task is centered on decision-making. Overall, recent findings suggest that task type can impact the task conflict-performance relationship and that one could expect a positive association for less routine and more novel tasks. Note, however, the literature investigating conflict-performance relationships is not based on an empirical

assessment of task complexity; rather the contexts defined as non-routine and novel are assumed to be more complex and remain so over time.

An early definition of task complexity relied on three components of the task at hand: component complexity, coordinative complexity and dynamic complexity (Wood, 1986). The number of distinct acts to be completed, or information cues to be considered, increases the component complexity of a task. Coordinative complexity depends on the relationship between task components and task outcomes. Finally, dynamic complexity refers to the extent to which task environment and the relationships between task inputs and outputs are dynamic. Campbell (1988) approaches task complexity as an objective feature of the task, arguing that four basic characteristics of a task contributes to its overall complexity: the number of potential paths to arrive at an end-state, the number of potential end-states, conflicting interdependence among paths, and uncertain or probabilistic linkages between paths and outcomes. In a recent revisit of task complexity, Hærem and coauthors (2015) challenge the assumptions made previously, for example, whether complexity is independent of its context and whether it is an objective property of the task separable from actors and their potential behaviors. However, their conceptualization of task complexity still includes the previously identified components, paths, and outcomes as they characterize complexity of tasks through a probabilistic network of actions, actors, and information.

Note that while Hærem and coauthors (2015) question the approach to task complexity in the literature, it is not that all authors suggest that complexity of a task is just an objective characteristic. Campbell (1988), for example, discusses complexity as potentially being subjective – as a "psychological experience of the task-doer" – and also

an interaction between the task and the person. However, his focus is on the objective complexity and argues that "experienced complexity is merely a reaction to task characteristics" (p. 48). Few other authors investigated how subjective complexity, or the individual perceptions of task complexity, impact outcomes (Haerem & Rau, 2007; Mangos & Steele-Johnson, 2001; Maynard & Hakel, 1997); all these publications see complexity as having objective and subjective aspects. Despite this perspective, however, the dominant view in the literature is to focus on task complexity through an objective perspective and is on the extent to which its characteristics makes the task complex.

Hypotheses

The theory presented below applies to strategic initiative teams as well as other cross-functional, and temporary, strategic decision-making teams. These teams undertake potentially complex tasks, and I conceptualize time from a perspective of the life cycle of the *main* task that a team undertakes (Ancona et al., 2001). For example, a strategic initiative team has a potentially complex task: formulation and implementation of a *specific* strategic initiative. To accomplish this main task, many decisions are required to be made and different components of the process need to be completed. Moreover, the task's definition and duration might be vague from the beginning; dependent on many factors such as organizational priorities, the structural and strategic contexts, all of which are all ultimately reflected in the resource allocation process (Noda & Bower, 1996). However, the life cycle of the team is known: the team, in its current form, will cease to exist once the initiative is developed and implemented or the initiative is canceled over many rounds of resource allocation. As such, I assume that the main task and team life

cycle are temporally equivalent; the team ends when the main task being undertaken is completed, successfully or not.

This conceptualization of the team impacts how this paper theorizes about time. Ancona and her co-authors (2001) note that different authors used time in their theoretical models with diverse approaches: for example, time could be seen literally, as a clock, or it could be used to characterize different events that are cyclical, or maybe as predictable or unpredictable. I use the life cycle conceptualization to note that there are different events and milestones that are expected in the life cycle of the team, and these events will be characterized by specific decisions that the team undertakes. As such, time should not be seen literally as a clock, rather it should be seen as a sequence of events or milestones in the life cycle of the team. These events can be represented through the initiation of certain activities, completion of reports, or evaluations of team progress for resource allocation. This conceptualization of the team life cycle is also in-line with the episodic nature of team interactions discussed by Marks, Mathieu, and Zaccaro (2001).

While this theorizing can also apply to other teams, I am not considering the impact of conflict across different tasks. In other words, I am not taking into account how task conflict in one task could impact conflict in other tasks. As such, I refrain from extending these arguments to teams that are undertaking multiple major tasks, whether those tasks are routine or complex. Similarly, the focus is on temporary teams – as opposed to permanent ones such as top management teams – as team experiences in one task might spill into and impact experiences in others. Overall the nature of the team, as well as the conceptualization of time, present a boundary condition to the theory proposed below.

I will first focus on changes in task complexity in theorizing, as I will later argue, it is the driving mechanism behind the relationship between task conflict and team performance. Specifically, I argue that task complexity faced by strategic initiative teams will decrease over time, relative to its earlier level. Building on the classification by Campbell (1988), task characteristics for complexity can be based on the availability of multiple potential paths to arrive at desired end-states, the presence of multiple outcomes, and a probabilistic interdependence among these paths and outcomes. As initiative teams interact, they identify problems and outcomes, create paths for these outcomes and make selections based on their bounded rationality. However, as time progresses, the number of paths and outcomes are reduced; for example, once a team has formally identified the problem it will work on, it has essentially identified *all* possible problems by eliminating those that are not chosen. In other words, as the team makes choices on problems and alternatives, it reduces the number of paths and outcomes that are available as other alternatives become irrelevant by the virtue of being non-chosen. As such, I argue that over time, relative to earlier levels, task complexity decreases for focal teams. Note a crucial distinction: I do not necessarily suggest that tasks become 'simple' over time, rather I argue that tasks have their highest complexity at the early stages and become less complex over time due to progress made towards the final goals.

An illustration of the hypothetical representation of complexity reduction over time is shown in Figure 8. Starting with 3 alternatives, and 3 potential end states, there are various paths available to the decision-makers. Some of these paths do not lead to outcomes, i.e. dead-ends that might indicate project failure, and some others allow for single alternatives to move forward. If a hypothetical team were to follow the path

identified with circles and the dashed line, they begin with a host of initial alternatives. But as they make their first choice, they begin to reduce their task complexity – for example, one of the three final outcomes, Outcome 1 at Time 3, is no longer available to them. As such, through this representation, it is possible to see that complexity of the task at hand will reduce over time.

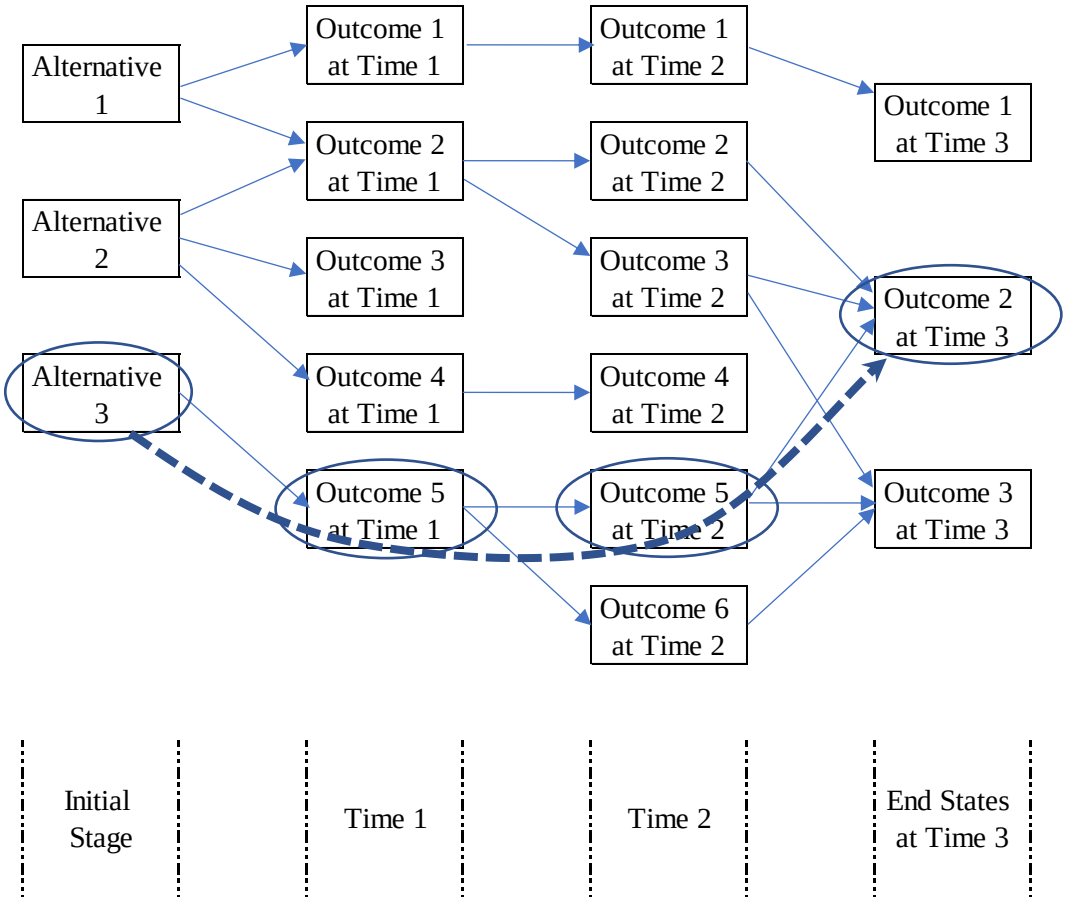


Figure 8: Relationship between Team Choices and Available Alternatives over Time

Literature supports these arguments. Many organizational projects are initiated by a mandate, an overall direction with a clear goal in mind (Birkinshaw & Mol, 2006; Nag, Corley, & Gioia, 2007). While this direction is provided, activities that are undertaken early in the initiative's life cycle – for example championing activities to gain support –

facilitate idea generation and the articulation of the initiative by incorporating new perspectives (Floyd & Wooldridge, 2000). This articulation helps solidify group-level consensus around the goals of the initiative allowing for implementation through concrete steps such as undertaking pilot projects. As such, a mandate is provided, it is elaborated over time, but in most cases, eventually, group direction settles down to one or a few chosen paths in lieu of others.

This model shows the movement of the initiative through a high complexity stage where the ideas are not solidified to stages where complexity decreases as objectives become known and certain paths are created. This view does not suggest that a-priori plans for implementation are rigid. Moreover, I am not necessarily assuming that the strategic initiative team is completely able to identify all of the alternatives and outcomes. Some paths may not be obvious from the beginning; initiative members can become aware of different alternatives later in the developmental process. But unawareness does not make these alternatives irrelevant, they constitute a part of the potential paths that the initiative can take *and* some of these paths and alternatives – whether they are identifiable or not – will be eliminated over time. Research shows that new uncertainties and unexpected events occur during the implementation of initiatives and there is a need for flexibility for adaptive decision-making (Klingebiel & De Meyer, 2013). But it could be expected that as implementation progresses, "the probability distributions of uncertainties narrow", indicating that the probabilities associated with paths and outcomes become clearer over time (Klingebiel & De Meyer, 2013, p. 151).

These arguments suggest two different ways in which task complexity is reduced. Firstly, there is a path dependency effect where steps undertaken in past decision-making

episodes put the team on a certain track where the team's future choices and actions become more limited. Secondly, as the team progresses in its work, previous uncertainties are either realized or become more certain, which indicate that the probabilities between inputs and outputs are changing. These two arguments suggest that the objective characteristics impacting task complexity are in fact dynamic over time. These arguments do not necessarily suggest that individuals' perceptions of task complexity are also reducing, research has shown that perceptions of task complexity depend on individual differences (Haerem & Rau, 2007; Maynard & Hakel, 1997). However, research also shows that objective complexity is a strong correlate of subjective task complexity – perceptions of subjective complexity is partly related to the objective complexity of the task at hand (Maynard & Hakel, 1997). Then, it follows that if the objective components of task complexity are becoming 'simpler' as I suggest, subjective perceptions of task complexity are also likely to be impacted.

Combining these arguments, we expect that for a strategic initiative team, task complexity will be at its highest at the early stages of the team's interactions and will drop over time as the team takes on the task at hand. Hence:

Hypothesis 1: Task complexity will reduce over the lifetime of a strategic initiative team.

Note that the above hypothesis does not make any claims regarding performance effects stemming from decreasing complexity. Going back to Figure 8; it is entirely possible that the eliminated Outcome 1 at Time 3 might represent the best performance for the team. By making decision-related choices, the team is decreasing complexity but that does not guarantee high performance – they might be eliminating choices and

making their task simpler but those eliminated choices may be better alternatives than the chosen ones. Thus, one needs to ensure that team interactions would improve strategic decision-making at these critical stages when complexity is highest.

Building on Hypothesis 1, I theorize about the impact of task conflict on performance in such teams. Although there are conflicting findings, past research on intrateam conflict suggests that some task conflict will help teams that operate under complex environments. The argument for this expectation is that complex tasks require teams to engage in rigorous debate, generate alternatives and evaluate the situation critically to achieve successful performance (Bradley et al., 2015). For teams undertaking routine tasks, the issue of alternative generation is not necessarily critical, as routine tasks are predefined and performed with little variation. In such teams, conflict on task issues will not only disrupt the work at hand but can generate resentment in the group spilling over into relationship conflict (Jehn, 1995; Jehn & Bendersky, 2003).

Regarding the findings by Jehn and Mannix (2001), I note that, although team interaction and developmental models have identified distinct stages of activity for decision-making, it has long been argued that these stages might not be necessarily sequential (Eisenhardt & Zbaracki, 1992; Mintzberg, Raisinghani, & Théorêt, 1976). Witte (1972) argues that individuals start evaluating alternatives even as they start focusing on formulating problems. Identification of a problem is not necessarily an activity that always precedes the generation of solutions. Removing this assumption negates the reasoning for the mid-point as the *only time* that task conflict leads to positive outcomes. As teams begin to work on their problems, the extent to which they disagree in any stage will be influenced by their evaluations of the situation and possible outcomes.

Moreover, critical milestones facing a team – such as those typically faced by strategic initiative teams in the resource allocation process – will constrain the timing of decision-making and the benefits of task conflict. Thus, there may be a burst of cognitive activity as an initiative is launched and as its progress is evaluated over time by top management. As the process unfolds, however, I argue it becomes increasingly unlikely that the decision-making situation will be sufficiently complex to benefit from task conflict.

There is also evidence that conflict during information seeking stages of team interactions prevents cognitive biases from interfering with information processing (Schulz-Hardt, Jochims, & Frey, 2002). This lends credence to the argument that when initiative teams are thinking about alternatives during early stages, conflict could limit the effects of bias on the constructive evaluation of alternatives. Moreover, if these early periods represent the highest level of complexity, as argued above, there are many potential paths and outcomes that need to be identified and considered. Thus, when the team is facing complexity in pursuing a task, I expect task conflict to have a positive impact on team performance.

However, as alternatives become fewer and increasingly certain, the benefit of additional input, idea generation, and discussion fades. The utility of debate stemming from task conflict is reduced, eliminating its potential positive impact on performance. Moreover, research has shown that there is a propensity of task conflict to spill into relationship conflict (De Dreu & Weingart, 2003; de Wit et al., 2012). While there are many conflicting findings in the intrateam literature, one robust finding is the negative impact of relationship conflict on all types of outcomes, including cohesion, commitment, and performance, and in contexts as varied as field studies of top management teams to

laboratory settings involving students (de Wit et al., 2013; O'Neill et al., 2013). If task conflict remains at high levels, it can trigger relationship conflict and breed personal animosity among team members limiting the future consensus required for effective implementation (Amason, 1996; Amason & Sapienza, 1997). Thus, as the task becomes less complex over its life cycle – compared to its earlier level, unnecessary task conflict experienced later is likely to become counterproductive and interfere with the effectiveness of group processes. Hence, we expect that:

Hypothesis 2: Task conflict experienced early within a strategic initiative's life cycle will positively impact team performance.

Hypothesis 3: Task conflict experienced later within a strategic initiative's life cycle will negatively impact team performance.

Methods

Data and Sample

I used a sample of senior-level business administration students, from a large public university in the US, enrolled in multiple sections of a required strategic management class to test the hypotheses. Differences in managerial and student samples can arise, but they are usually insignificant for outcomes related to behavioral and psychological phenomena such as those studied here (Farh, Lanaj, & Ilies, 2017; Northcraft & Neale, 1987). More importantly, the specific task they undertake, a business simulation[4], fits with the characteristics ascribed to strategic initiative teams. The business simulation is novel and uncertain to the students and the task is a major part of

[4] Capstone Simulation by Capsim Management Simulations, Inc.

the coursework in a class required for graduation. Thus, the context I am investigating corresponds to the descriptions of strategic decision-making in the literature, highlighting novelty and importance (Eisenhardt & Zbaracki, 1992). The nature of the simulation fits with the life cycle perspective of time that is utilized above; teams go through decision-making rounds that require specific tasks to be completed at different milestones that are strictly enforced. Finally, given that this sample is composed of teams that are working on important and identical tasks over a relatively long period of time, there is a controlled environment in which to undertake this study. As opposed to samples of strategic initiative teams, which would be unlikely to coalesce around homogenous developmental and task-related characteristics, these teams are identical in their tasks, milestones, expectations, and timing. As such, although this research project is not an experiment, the task and the timing of actions and responses are controlled to provide a setting where results from different teams can easily be compared. Overall, I argue that this sample is not only appropriate but has added benefits to test the hypotheses posed.

Regarding the context, teams are given control of a firm in a simulated industry and they make a series of decisions regarding operations, finance, marketing, human resource, quality management and research & development of their firms. Teams in a section are placed as competitors and at the beginning of the simulation, they are completely equivalent, including their product offerings, market shares, and financial outlook. Teams determine their own strategy (i.e. low cost, broad differentiator, etc.) and then within a predetermined time-frame, they make decisions that they see with to their intended strategy. After the simulation is progressed by the instructor, teams undertake the next round of decision-making for the following simulated year. Within the bounds of

the simulation, teams are free to do anything they please: they can offer new products, finance their operations by stock offerings (or bank loans or firm equity, etc.), undertake marketing campaigns (large or small), or do research and development to produce technologically advanced products. The exercise runs for 6 decision-making rounds across approximately 6 weeks: during this time, the simulation remains at the forefront of class activity as teams are also asked to file memos on their strategy, competitors and markets and provide feedback to instructors on their progress. Approximately 30 percent of a student's course grade is based upon this simulation, making it a significant part of their final grade in a required course for their upcoming degrees. Note that, the data was collected across multiple semesters, in sections taught by the same set of instructors with a similar course syllabus. Data does not show significant differences due to instructors or semesters.

I use two different sets of students to test the hypotheses. The reason for having two samples is due to the availability of complexity data for one of the samples. I will discuss this potential limitation in the discussion section. My first sample is composed of 190 students undertaking the simulation task. These students were surveyed three times during the simulation period: after the first round (T1), after the third round (T2), and after the completion of the simulation (T3). From a total of 190 students enrolled, 164, 143 and 157 completed surveys were returned for the three respective survey administrations. 120 students completed all three surveys for a 63% response rate, but I used all available data in the analysis. For sample size reasons I am analyzing individual-level data, however, when aggregated to team level (35 teams), the conclusions are

supported. This first sample is used to test hypothesis 1, whether team members' perceptions of task complexity decreased over time.

The second sample is composed of 458 students in 80 teams, team size ranging between 4 and 7 students (mean: 5.7). These teams are undertaking the same simulation task and are surveyed at the same intervals. The initial population was 562 students in 100 teams, but 20 teams were not included in the final sample due to the inclusion criteria of at least 2 repeating respondents per team per survey. In other words, only teams that had at least two students who responded to every single one of the surveys were included. I made this choice to ensure that team experiences are captured across time from multiple respondents and analysis of variance shows that there is no difference in performance between excluded teams and those in the sample. For each of the 80 teams in the final sample, 4.5 responses per survey administration were gathered indicating that approximately 79% of survey responses were received. This sample is used to test hypotheses 2 and 3.

Measures

Measures for Hypothesis 1. As noted before, many explorations of task complexity used measures based upon external raters, theoretical justifications, experimental conditions and components of the task itself as potential evaluations of task complexity. In many of these cases, task complexity was identified as a categorical variable and differences between these categories (e.g. simple vs. complex, complex vs. less complex) were explored (Bradley et al., 2015; Hærem et al., 2015). As such, there are not many available survey measures to apply in this setting, and I decided to create items to measure task complexity. Hærem and colleagues (2015) suggest that task

complexity is inherently a part of the task itself and should not necessarily be thought independent of it. As such if the task context is an element of the task, it should be a part of the measurement when considering a characteristic such as task complexity. Following this argument, I created two separate measurements that are based upon the task itself; specifically, one measured at the last period and the other measured longitudinally across three surveys. Note that all survey items are provided in appendix A.

The first measure (i.e. *Comp1*) was collected at the final survey (T3) and was composed of three items intended to capture the change in students' perceptions of task complexity over time. The items were designed to capture complexity in the specific context of the business simulation ($\alpha = 0.64$, I discuss this lower-than-desired alpha in the next section). The second measure (i.e. *Comp2*) was collected longitudinally and is composed of two, reverse coded, items. These items were designed to measure the extent to which information became available to the students, which is directly related to the resolution of uncertainties over time. Across three surveys, the Cronbach's alpha for this measure ranged between 0.70 and 0.87.

In analyzing Hypothesis 1, one control variable is used: *task learning over time*. Given an exercise such as a business simulation, one could expect that there would be some learning that occurs over time and this learning could impact perceptions of task complexity. Simply put team member learning, training and proficiency on the simulation could impact their perceptions of task complexity later in the game (Haerem & Rau, 2007; Maynard & Hakel, 1997). Thus, I measured students' proficiency with the simulation at each iteration of the survey with a three-item measure. Cronbach's alpha for this measure ranged between 0.79 and 0.85 across the three time periods.

Measures for Hypothesis 2 and 3. I utilized a sample of 458 students to investigate Hypotheses 2 and 3. The ultimate dependent variable for these hypotheses is *team performance* which is operationalized using two different measures. The reason for utilizing multiple performance measures is the recent findings that show the sensitivity of team performance operationalization on the task conflict-performance relationship (de Wit et al., 2012; O'Neill et al., 2013). In this paper, I used Return-on-Sales, which is a commonly used financial measure in strategic management research, as the objective measure for team performance. I also used a three-item perceptual measure capturing members' perception of their team's simulation performance ($\alpha = 0.79$). Both performance measures are collected at the end of the simulation.

I operationalize *task conflict* with the four-item measure from Jehn (1995). In this analysis, I also control for the level *of relationship conflict*, using the four-item measure from the same article (Jehn, 1995). Despite being developed over 20 years ago, both of these measures continue to be heavily used in the literature (e.g. Bradley, Klotz, Postlethwaite, & Brown, 2013; Jehn, Rispens, & Thatcher, 2010; Thiel, Harvey, Courtright, & Bradley, 2017). There are arguments regarding the wording of these widely used scales in the measurement of intrateam conflict (Loughry & Amason, 2014), but empirical investigations did not find significant differences in the operationalization of conflict (de Wit et al., 2012) and I chose to utilize them to be compatible with past research. Both constructs were measured at each survey iteration and the Cronbach's alpha for these measurements ranged between 0.90 and 0.97.

Finally, I considered five control variables regarding the diversity of the team. In light of the sample size of 80 teams and the reliability of analyses, I wanted to have as

few control variables as possible. Thus, I investigated the correlations among the variables of interest and potential diversity controls of *team size, the number of existing friendships* and *gender, race,* and *functional heterogeneity* (undergraduate major). Neither team size nor functional heterogeneity showed significant correlations with the variables of interest thus excluded from the analyses – note that their addition to the models as controls do not change final conclusions. Along with gender and race heterogeneity, I saw that the number of prior friendships in the team had significant correlations with at least one variable of interest. Thus, I controlled for these three variables in the analyses. Gender and race heterogeneity were calculated using a modified Herfindahl-Hirschman index. The number of existing friendships was calculated by adding the total number of prior friendships in the team as measured by the number of dyadic relationships from social or school-related activities before the semester began.

Reliability, Validity, Aggregation and Common Methods Issues

This study investigates the variables of interest using, for the most part, self-reported measures. Thus, evidence regarding the reliability and validity of the measures is required. While the surveys were designed with respect to the best practices described in the literature in order to minimize common methods bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), I also conducted a variety of analyses to confirm the reliability and validity of the measures.

First, I undertook separate confirmatory analyses (CFA) for both samples at the individual level to examine construct validity. For the smaller sample to test Hypothesis 1, I conducted a confirmatory factor analysis with 7 constructs: complexity scale measured at the last survey, and the three longitudinal complexity and learning scales

measured at each survey. The CFA provided good fit to the data, the ratio of the chi-squared statistic to the degrees of freedom was 1.4, less than the suggested ratio of 3 (Carmines & McIver, 1981); goodness-of-fit indices such as IFI (0.97) and CFI (0.97) were greater than 0.9 and 'badness-of-fit' index RMSEA (0.04) was less than 0.07 (Hu & Bentler, 1999). Indicating convergent validity, and except for the items of Comp1 scale for task complexity, all factor loadings were greater than 0.5 and statistically significant with respect to their constructs ($p < 0.01$). Average variance extracted (AVE) was greater than 0.5 for all constructs and their reliabilities were above the suggested threshold of 0.7 (Nunnally, 1978) ranging between 0.70 to 0.89. Finally, indicating discriminant validity, AVE for each construct was greater than the squared multiple correlations.

With respect to Comp1 scale, the first item on the scale had a very low factor loading (0.24) and it was also the reason behind its low Cronbach's alpha (0.64) and average variance extracted (0.46). Despite this shortcoming, the item was significant with respect to its construct ($p<0.01$). In a separate analysis, I excluded this item from the measure and saw that the remaining two-item measure shows significant improvement in its reliability and validity, but conclusions do not change per the inclusion of this item for this construct. Thus, I decided to use the three-item scale for a better fit of the measurement with the theoretical conceptualization of task complexity.

For the larger sample to test Hypotheses 2 and 3, I also created a model for 7 constructs measured by the survey: three longitudinal measurements of task and relationship conflict and the perceived team performance measured at the final survey. The CFA again provided good fit to the data with acceptable statistics: χ^2/df (2.60), IFI (0.95), CFI (0.95), and RMSEA (0.05). All factor loadings were greater than 0.5 and

statistically significant with respect to their constructs ($p < 0.01$). AVE was greater than 0.6 for all constructs and their reliabilities were well above the suggested threshold of 0.7 (Nunnally, 1978) ranging between 0.81 to 0.96. Finally, AVE for each construct was again greater than the squared multiple correlations, indicating discriminant validity. Overall, both data sets suggest empirical differentiation among the measured constructs both within and across time periods.

The conflict hypotheses are at the team-level – in order to get team-level measurements, I averaged individual level responses. However, this approach requires the justification for such aggregation. I followed recent methodological guidelines in the literature for this analysis (Biemann, Cole, & Voelpel, 2012; Woehr, Loignon, Schmidt, Loughry, & Ohland, 2015). For each aggregated construct, at each time point, I calculated $r_{WG(J)}$, ICC(1) and ICC(2) statistics. I calculated $r_{WG(J)}$ statistic with two null distributions; a uniform and a slightly-skewed null distribution. All $r_{WG(J)}$ statistics with a uniform distribution were greater than 0.73 with a mean of 0.80. When the null distribution was skewed, $r_{WG(J)}$ values ranged between 0.60 and 0.77 with a mean of 0.70. These statistics are comparable to the mean values reported by Woehr and colleagues (2015): 0.84 and 0.67 for uniform and skewed null distributions respectively, providing support for aggregation. Similarly, mean interclass correlations of ICC(1) = 0.32 and ICC(2) = 0.62 are comparable to previously reported statistics; Woehr and coauthors (2015) find that mean values in published articles for these statistics are 0.21 and 0.66 respectively. Woehr and colleagues (2015) also undertake a large sample study of student peer evaluations, investigating consensus-based aggregation with over 39,000 individuals in 9,660 teams and they also use task and relationship conflict constructs operationalized

with Jehn measures in their study. Across their sample, their calculated $r_{WG(J)}$ statistics are higher than presented here (range: 0.81 to 0.92) but they find lower ICC(1) and ICC(2) values with a range of 0.15-0.18 for ICC(1) and 0.52-0.56 for ICC(2). Thus, comparing these statistics to those in the literature, there is ample evidence to justify the aggregation of individual responses to team-level variables in the data.

Finally, as most of the variables come from survey instruments, I also investigated possible biases resulting from the usage of a single method. As noted before, the survey was designed according to the best practices described in the literature in order to minimize common methods bias (Podsakoff et al., 2003). For example, while students were offered extra credit for survey participation, they were given complete assurance regarding confidentiality and privacy of their responses as well as the exclusion of the data for grading purposes. They were also provided with alternative means to receive extra credit. Moreover, due to its longitudinal design, analyses include variables measured at different points in time; there were at least 2 weeks between the administration of any two surveys and a strict schedule was followed to collect responses at the intended times. Finally, of the two variables of team performance, one (ROS) is an objective measure collected directly from simulation results.

Regardless of survey design, I performed two tests to ensure common methods bias is not an issue in the data. First, I performed Harman's single factor test by loading the items in an exploratory factor analysis requiring a single factor output. In both data sets, results showed that a single factor accounts for less than 50 percent of the variance, indicating a worse fit compared to the multi-factor models. Second, following Siemsen, Roth, and Oliveira (2010), I added a marker variable to the model. Siemsen and his co-

authors (2010) analytically show that adding an unrelated marker variable into a regression equation can control for common methods bias, if it exists. Specifically, I used a marker variable designed to capture how frequently teams met over time, measured with a two-item survey scale. I first reran factor analyses while including the items for the marker variable and confirmed good fit and separation of the constructs as before. Next, I investigated the relationships between the marker variable and the other constructs in the model and confirmed that none of them exhibited high correlations compared to the suggested cut-off value of 0.3 (Siemsen et al., 2010); all correlation coefficients were less than 0.2. I reran the models with the marker variable added as a control variable. The models with the marker variable confirmed my initial conclusions, further providing evidence that even if common methods bias existed in the data, these results are robust.

Overall, the analyses confirmed that the model, variables and research design were robust to confidently analyze the theoretical arguments. In the next section, I report the results.

Results

The means, standard deviations, and correlations for both data sets are provided in Tables 2 and 3. The correlation coefficients are as expected: complexity and learning are negatively associated; conflict variables are highly correlated within and across time, in general, they also have a negative relationship with performance variables; and the two performance measures are highly correlated.

To test the first hypothesis, I used multiple methods. The change in complexity, using the cross-sectional measure Comp1, is assessed with a t-test to see if the mean

value of the response is significantly different from the mid-point of the scale. Due to the construction of scale items, a higher value indicates decreasing complexity. The results show that student responses (mean = 5.43) are significantly higher than the mid-point of 4, indicating respondents' agreement with the statements (*t =17.14, df = 156, p=0.000*). This finding supports the argument that task complexity is not constant across time, but rather decreasing in the eyes of respondents.

Table 2: Means, Standard Deviations and Correlations for Complexity Hypothesis

Variables	Mean	St. Dev.	1	2	3	4	5	6	7
1 Learning at T1	4.76	1.33	(0.81)						
2 Learning at T2	5.21	1.29	0.03	(0.79)					
3 Learning at T3	5.71	1.20	0.03	0.45**	(0.87)				
4 Comp1 at T1	3.84	1.45	-0.14†	-0.30**	-0.21*	(0.79)			
5 Comp1 at T2	3.21	1.23	-0.00	-0.42**	-0.37**	0.51**	(0.70)		
6 Comp1 at T3	2.87	1.36	-0.15†	-0.23**	-0.48**	0.37**	0.51**	(0.87)	
7 Comp2	5.43	1.04	0.00	0.26**	0.49**	-0.26**	-0.37**	-0.43**	(0.63)

Coefficient alphas are in parantheses, n for correlation coefficients are between 127 and 164 individuals, **p<0.01; *p<0.05; †p<0.1

Table 3: Means, Standard Deviations and Correlations for Conflict Hypotheses

Variables	Mean	St. Dev.	1	2	3	4	5	6	7	8	9	10
1 Gender Heterogeneity	0.39	0.15	--									
2 Race Heterogeneity	0.26	0.23	0.03	--								
3 Previous Friendships	1.76	1.06	-0.32**	-0.10	--							
4 Task Conflict (TC) at T1	2.79	0.80	0.11	0.12	-0.24*	(0.90)						
5 Relationship Conflict (RC) at T1	1.99	0.91	0.15	0.09	-0.29*	0.83**	(0.94)					
6 TC at T2	2.71	0.80	0.19†	0.08	-0.23*	0.62**	0.64**	(0.91)				
7 RC at T2	2.03	0.91	0.16	0.01	-0.15	0.58**	0.67**	0.82**	(0.94)			
8 TC at T3	2.63	0.88	0.05	0.15	-0.18	0.61**	0.55**	0.64**	0.64**	(0.91)		
9 RC at T3	2.14	1.00	0.11	0.04	-0.16	0.58**	0.63**	0.68**	0.74**	0.82**	(0.96)	
10 Perceived Performance	5.31	1.06	-0.16	-0.22*	0.08	-0.07	-0.18	-0.31**	-0.35**	-0.31**	-0.40**	(0.79)
11 Return on Sales	9.17	9.44	-0.15	-0.19†	-0.14	0.19	0.10	0.00	0.05	0.01	-0.08	0.60**

Coefficient alphas are in parantheses, n=80 teams, **p<0.01; *p<0.05; †p<0.1

With the longitudinal measures, I undertook two tests. First, I performed paired t-tests between different time periods and investigate if there are significant differences between any survey iteration; specifically, I examined the differences between learning and complexity from time 1 to time 2, time 2 to time 3, and time 1 to time 3. Provided in Table 4, all six of the paired t-tests that I conducted were significant at $p < 0.01$.

Differences across time show that students become more aware of their competitor strategies and potential actions that they face; these findings indicate that complexity is decreasing during the simulation task as individuals become aware of previous unknowns. Additionally, as expected, the results also show that students' proficiency with the simulation is increasing significantly throughout the task (*p < 0.01)*.

Table 4: Results of the Paired T-Tests regarding Task Complexity

	Paired Differences [a, b]					
Pairs	Mean	St. Dev.	95% CIs	*t*	*df*	*p-value*
Comp2 at T1 - Comp2 at T2	0.63	1.33	0.40, 0.86	5.50	133	0.000
Comp2 at T2 - Comp2 at T3	0.36	1.34	0.12, 0.59	3.01	126	0.003
Comp2 at T1 - Comp2 at T3	1.01	1.56	0.75, 1.27	7.66	140	0.000
Learn at T1 - Learn at T2	-0.48	1.80	-0.79, -0.17	-3.09	133	0.002
Learn at T2 - Learn at T3	-0.54	1.31	-0.77, -0.31	-4.64	126	0.000
Learn at T1 - Learn at T3	-1.00	1.73	-1.29, -0.71	-6.89	140	0.000

[a] Mean values indicate a decrease in complexity and an increase in learning

[b] A list-wise deleted sample of 120 individuals show identical conclusions

Second, I used the MIXED procedure in SPSS to determine whether there is a significant change in complexity over time. This procedure is similar to Generalized Linear Modelling, but it is designed to test changes in repeated measures that are correlated across time. Here, I am interested in seeing changes across time in the dependent variable, task complexity. In this model, I used student proficiency in the simulation as a covariate. Results, provided in Table 5, show that the learning effects have a negative impact on complexity; this finding indicates that as students become more proficient with the simulation their perception of its complexity decreases. While including these learning effects as covariates, however, I still find that time has a significant impact on complexity. The coefficient of time 1 is significantly higher than the control group, time 3, indicating higher complexity early in the simulation (*b = 0.63, p=0.000)*. The coefficient of time 2 is also positive compared to the control group, but its

effect is not significant. Note that these results also hold when major, gender, race and team size are used as control variables, both at the individual and the team level.

Table 5: Results of the Mixed-Linear Model regarding Task Complexity

Parameter	Estimate	95% CIs	*t*	*df*	*p-value*
T = 1	0.63 (0.15)	0.34, 0.93	4.22	460	0.000
T = 2	0.16 (0.15)	-0.13, 0.46	1.09	460	0.275
T = 3	0[a]				
Learn	-0.35 (0.05)	-0.44, -0.26	-7.52	460	0.000

[a] Comparison group for Time
Standard errors in parantheses

Taken together, the results provide evidence to the argument that task complexity is not constant across the project's life cycle and, in fact, decreasing over time. Moreover, I find that this effect is not just due to the increasing proficiency of team members, rather time plays a role as well. Overall, these analyses support Hypothesis 1.

I performed linear regression analyses to investigate Hypotheses 2 and 3. Table 6 shows the results when ROS was used as the dependent variable. Model 1 shows that task conflict measured at time 1 has a marginal positive impact on ROS ($b = 4.86$, $p = 0.055$) whereas relationship conflict has a negative but insignificant impact. In Models 2 and 3, I added task and relationship conflict at time 2 and at time 3 respectively. Controlling for relationship conflict, task conflict experienced in later periods does not have a positive impact on ROS.

Although the variance inflation factors indicating potential multicollinearity among variables, specifically conflict variables across time, were less than 5, I decided to further investigate these claims by looking at the impact of increasing levels of task conflict on the dependent variables. This procedure decreased the potential for multicollinearity in the analyses. In Model 4, I added the two change variables calculated

by taking the difference in the level of task conflict across time. Results show that increases in task conflict from T1 to T2 and T2 to T3 both have a negative, but insignificant, impact on team performance as measured by ROS.

Table 7 shows the results when the perceptual measure of team performance was used. In Model 5, early task conflict is shown to have a positive insignificant impact whereas relationship conflict has a negative impact on team performance (*b = -0.46, p = 0.051*). In models 6 and 7, the addition of task and relationship conflict at time 2 and time 3 is shown. At both times, relationship conflict has a negative significant impact on subjective team performance whereas task conflict in later periods does not impact team performance. Finally, in model 8, I investigate the impact of the change in task conflict on subjective team performance. Results show increasing levels of task conflict negatively impacts team performance whether the increase is between time 1 to time 2 (*b = -0.35, p = 0.051*) or time 2 to time 3 (*b = -0.65, p = 0.002*).

Overall, results support both Hypotheses 2 and 3. I find that early task conflict has positive, albeit marginal, impact on team performance when measured by an objective measure such as ROS (model 1). I also find that early task conflict does not negatively impact members' perceptions of team performance (model 5). Moreover, when later task conflict is controlled for in other models (models 2, 3, 6, 7), the positive impact of early task conflict on the two measures of performance is, at least, marginally significant or stronger. These findings show that task conflict experienced early in the task life cycle can have a positive impact on overall team performance.

Table 6: Results of the Regression Analyses with ROS as the Dependent Variable

	Model 1			Model 2			Model 3			Model 4		
	b	***β***	***p-value***	***b***	***β***	***p-value***	***b***	***β***	***p-value***	***b***	***β***	***p-value***
Control Variables												
Gender Heterogeneity	-12.86 (7.61)	-0.19	0.096	-12.46 (7.69)	-0.19	0.110	-13.55 (7.61)	-0.21	0.080	-12.69 (7.74)	-0.19	0.106
Race Heterogeneity	-10.05 (4.74)	-0.24	0.038	-9.65 (4.79)	-0.23	0.048	-9.71 (4.79)	-0.23	0.047	-9.62 (1.11)	-0.23	0.050
Number of Friendships	-1.72 (1.10)	-0.18	0.124	-1.84 (1.12)	-0.20	0.105	-1.74 (1.11)	-0.19	0.120	-1.76 (1.11)	-0.19	0.118
Independent Variables												
Task Conflict at Time 1 (T1)	4.86 (2.49)	0.41	0.055	5.33 (2.54)	0.45	0.040	4.96 (2.61)	0.42	0.062	3.45 (2.93)	0.29	0.242
Relationship Conflict at T1	-2.58 (2.15)	-0.25	0.235	-2.51 (2.40)	-0.25	0.301	-1.29 (2.46)	-0.13	0.603	-1.94 (2.29)	-0.19	0.400
Task Conflict at Time 2 (T2)				-2.67 (2.44)	-0.23	0.278	-2.29 (2.42)	-0.19	0.349			
Relationship Conflict at T2				1.53 (2.13	0.15	0.477	3.12 (2.26)	0.31	0.172			
Task Conflict at Time 3 (T3)							1.34 (2.20)	0.12	0.546			
Relationship Conflict at T3							-4.23 (2.17)	-0.43	0.056			
ΔTask Conflict from T1 to T2										-1.93 (2.01)	-0.15	0.339
ΔTask Conflict from T2 to T3										-0.85 (1.71)	-0.06	0.621
R^2		0.15			0.17			0.22			0.16	
ΔR^2 *(from Model 1)*					0.02			0.07			0.01	
F		2.44	0.043		1.89	0.085		2.01	0.053		1.85	0.093
ΔF (from Model 1)					0.60	0.552		1.40	0.123		0.47	0.630

Standard errors in parantheses, n=80

Table 7: Results of the Regression Analyses with Subjective Performance as the Dependent Variable

	Model 5			Model 6			Model 7			Model 8		
	b	***β***	***p-value***	***b***	***β***	***p-value***	***b***	***β***	***p-value***	***b***	***β***	***p-value***
Control Variables												
Gender Heterogeneity	-0.94 (0.83)	-0.13	0.258	-0.67 (0.80)	-0.09	0.401	-0.74 (0.78)	-0.10	0.347	0.86 (0.79)	-0.12	0.280
Race Heterogeneity	-1.04 (0.51)	-0.22	0.047	-1.10 (0.49)	-0.24	0.028	-1.11 (0.49)	-0.24	0.025	-0.93 (0.49)	-0.20	0.063
Number of Friendships	-0.03 (0.12)	-0.03	0.834	-0.01 (0.11)	-0.01	0.943	-0.01 (0.11)	-0.01	0.947	-0.04 (0.11)	-0.04	0.743
Independent Variables												
Task Conflict at Time 1 (T1)	0.39 (0.26)	0.29	0.143	0.47 (0.26)	0.35	0.076	0.53 (0.26)	0.40	0.049	0.00 (0.28)	0.00	0.990
Relationship Conflict at T1	-0.46 (0.23)	-0.40	0.051	-0.16 (0.25)	-0.14	0.510	-0.10 (0.25)	-0.09	0.683	0.31 (0.23)	-0.26	0.184
Task Conflict at Time 2 (T2)				-0.17 (0.25)	-0.13	0.503	-0.10 (0.25)	-0.07	0.699			
Relationship Conflict at T2				-0.38 (0.23)	-0.33	0.097	-0.17 (0.24)	-0.15	0.479			
Task Conflict at Time 3 (T3)							-0.00 (0.23)	0.00	0.994			
Relationship Conflict at T3							-0.42 (0.22)	-0.40	0.055			
ΔTask Conflict from T1 to T2										-0.65 (0.20)	-0.43	0.002
ΔTask Conflict from T2 to T3										-0.35 (0.17)	-0.23	0.051
R^2		0.12			0.22			0.29			0.23	
ΔR^2 *(from Model 5)*					0.10			0.17			0.11	
F		2.02	0.086		2.91	0.010		2.81	0.003		3.11	0.006
ΔF (from Model 5)					4.64	0.013		4.06	0.047		5.24	0.008

Standard errors in parantheses, n=80

However, task conflict experienced later does not help but hinder team performance: task conflict experienced in mid- or late- periods does not have a significant impact on objective results (models 2-4) but has a negative impact on members' perceptions of team performance (model 8). Results also show that when relationship

conflict is controlled (models 6-7), this negative impact of task conflict disappears confirming the notion that task and relationship conflict frequently occur together. In sum, results support the argument that while early task conflict can benefit team performance, as team interactions continue those benefits disappear and unnecessary task conflict has the potential to do more harm than good.

Discussion and Conclusions

In this study, I examined the changing nature of task complexity in strategic initiative teams and investigated its impact of intrateam conflict and team performance. The results show that task complexity is not necessarily a stable characteristic of the strategic initiative task, and this has implications for team processes. Specifically, results show that early task conflict has positive impact on team performance whereas task conflict experienced later negatively impacts performance due to its cooccurrence with relationship conflict.

First, I investigate a core concept – task complexity – that has not garnered the attention it requires from the literature (Bradley et al., 2015; Kleingeld et al., 2011). As noted by Hærem and colleagues (2015), task complexity is often overshadowed or simplified in extant research, even though decision-making under high complexity is at the heart of major management theories (Cyert & March, 1963; DiMaggio & Powell, 1983; Williamson, 1981). Addressing recent calls for temporal investigations of task complexity (Bradley et al., 2015; Hærem et al., 2015; Kleingeld et al., 2011), this study shows that complexity is not constant throughout a task's lifetime and that it, in fact, decreases over time. This finding empirically supports the argument that task complexity

is not a characteristic independent of the task context, but rather an inseparable part of it (Hærem et al., 2015). In other words, characteristics of tasks contribute to their complexity, but this complexity is not necessarily independent of the context of the task itself. While I only investigate the temporal context, behaviors and actions of individuals are certainly an inseparable part of complexity as well, requiring addition investigation.

Within the context of strategic initiatives, this finding has serious implications. There is a growing body of work that utilizes strategic initiatives as a unit of analysis and recent research investigates behavioral and cognitive team processes in both intra- and inter- team contexts (e.g. Klingebiel & De Meyer, 2013; Lechner & Floyd, 2012; Lechner et al., 2010; Walter et al., 2016). However, this research stream assumes the complexity of initiative to be constant and theorizes accordingly. For example, Lechner & Floyd (2012) investigate influence activities team members undertake to gain support from intraorganizational actors located outside the strategic initiatives. They find that influence activities, such as rational justification and political bargaining, gain added importance when initiatives are exploratory – hence when initiatives are more uncertain and ambiguous. In light of the findings presented here, however, one could ask does the type of influence activity that would be beneficial for an exploratory initiative depend on the level of its *current* state of uncertainty and ambiguity, issues which are directly related to its complexity? Exploratory initiatives might start their development with a higher level of uncertainty, which suggests higher complexity, but does that also indicate that the level of complexity will remain at a high level? If complexity changes, it is possible that the type and extent of group influence activities that need to be undertaken would also be impacted. These are the types of questions that need to be addressed in future research,

but the results presented here suggests that a different perspective is needed – temporal and cognizant of the task context – to more properly analyze strategic initiatives and their team processes. While the dimensions of exploration-exploitation are helpful in characterizing strategic initiatives, this research shows that these categories, in-and-of themselves, might not be adequate when considering strategic initiative task contexts.

More generally, within the management literature at large, complexity is often assumed to be an idealized characteristic of the task (Hærem et al., 2015), for example top management teams are assumed to undertake complex tasks *all* the time, or strategic decision-making is assumed to be complex throughout the *entire* process. Thus, in empirical studies, task complexity usually is not directly measured but operationalized through dichotomous or categorical variables such as routine vs. non-routine, or, top management teams vs. work teams (Bradley et al., 2015). This research provides a provocative argument, and empirical evidence, that the complexity of a task decreases over time as long as the task is temporary and characterized by a life cycle punctuated by certain decision-making milestones. Task complexity is certainly impacted by learning and proficiency; experience with a certain task will decrease the complexity perceived by individuals undertaking that task. Empirical evidence, however, takes this learning into account and still shows that task complexity, considered through input and output alternatives, will change over the life time of a task. The validity of this claim needs to be further discussed, but it provides a starting point, and hopefully encouragement, for future research.

Another implication is that this study shows the temporal impact of task conflict on team performance. While there have been some studies regarding the relationship

between task conflict and performance over time (e.g. Farh et al., 2010; Jehn & Mannix, 2001), literature has not yet reached a robust conclusion regarding when task conflict can benefit team performance, requiring additional research (de Wit et al., 2012; Loughry & Amason, 2014). This study provides evidence that task conflict experienced earlier can allow strategic decision-making teams to analyze what they need to do early in the task's life cycle and concentrate on alternatives that they might face in the future. However, as the task moves along, increased discussion of alternatives in the form of task conflict does not provide a benefit, rather negatively impacts team effectiveness by inducing relationship conflict. Note that the characterization of time, early or late, relates to the sequence of milestones in the life cycle of the team task, not clock time.

This finding echoes the findings by Klingebiel and De Meyer (2013). They found that early in the strategic initiative life cycle when teams had time to consider future possibilities and uncertainties, these uncertainties were met with a rational, comprehensive process – a decision-making process that benefits from surfacing many diverse alternatives and task conflict. Later, however, when events were actually realized, and uncertainties became resolved certainties, teams relied on an ad-hoc problem-solving mode that was lacking comprehensive analysis and was therefore unlikely to benefit from task conflict.

This research also resonates with a recent study by Thiel and colleagues (2017) who find that relationship conflict experienced early in team interactions can be overcome and transformed to be beneficial. However, they also show that managing relationship conflict is done over time and is not an instantaneous process. Consistently, findings show that the negative effects of relationship conflict become greater over time

(see Models 3 and 7). Therefore, risking relationship conflict by having a discussion of diverse view points early in the team's life cycle appears to pay dividends, while in later stages, the effect of task conflict is not beneficial and may trigger relationship conflict when there is limited time to handle such conflict.

Methodologically, this study also shows that the time when task conflict is experienced and measured becomes important. There are results that provide conflicting evidence regarding the effectiveness of task conflict, and the timing of the measurement might have contributed to these findings. These results show significant evidence towards this argument, for example, while all conflict variables are highly correlated among each other, they have varying correlations with team performance. If the management literature moves toward more temporal and multilevel models as advocated (Humphrey & Aime, 2014; Korsgaard, Jeong, Mahony, & Pitariu, 2008; Kozlowski & Bell, 2013), I contend that some of the conflicting findings might be resolved and provide more conclusive evidence to the elusive findings in the literature.

Overall, combined with the existing temporal research on conflict (Farh et al., 2010; Jehn & Mannix, 2001; Peterson & Behfar, 2003; Tekleab, Quigley, & Tesluk, 2009; Thiel et al., 2017), the theoretical argument and empirical evidence provides a compelling conclusion. Literature has long argued that task conflict can help teams if they are undertaking complex tasks (Bradley et al., 2015; Jehn, 1995). I augmented this argument by proposing that task conflict is helpful when needed, i.e. when the tasks are complex. This does not necessarily go against the findings of Jehn and Mannix (2001) who showed that teams benefit from task conflict when they are going through a flurry of activity at mid-point. Taken together, these findings show that when there is activity that

can be characterized as high in complexity (Farh et al., 2010), task conflict can be beneficial. But it is also imperative to note that as teams move along their timeline, not only conflict breeds conflict, but the time available to resolve conflicts diminishes (Peterson & Behfar, 2003; Thiel et al., 2017). This suggests that teams can benefit from, and handle the consequences of, task conflict if experienced early on.

For managers of strategic initiatives, this implies that conflict management is crucial for effective teamwork. Techniques such as devil's advocacy (Priem & Price, 1991; Schwenk & Cosier, 1993) have been shown to have positive impacts on outcomes such as decision quality but not necessarily on overall performance. Scholars also argue that early, rather than late stage, interventions using these techniques can be more effective in improving team performance (Funk & Kulik, 2012). Results presented here corroborate these findings as there are differences between conflict and performance measures overtime. While I did not artificially induce conflict in these teams, evidence shows that task conflict can benefit team performance if experienced early on. However, results also show that conflict needs to be managed and contained within certain time frames, as the lack of a properly managed process is likely to have disastrous results.

As with all research, this study is not without limitations. First, I am using a student sample. While this setting allows to have significant control over the design of the study, it might limit the applicability of the findings to practicing managers. I believe that all research makes such tradeoffs: in this case, there is added reliability and internal consistency, but potentially a loss of some external validity. Given that a significant amount of understanding of psychological and behavioral phenomena comes from student samples, I conservatively believe that these results have, at least some,

generalizability to managers. Secondly, I used two separate samples in the empirical study. This was due to a lack of data of complexity on the larger sample, but at the same time, it also negates the potential for common methods bias impacting the results. More specifically, usage of two separate data sets can also eliminate concerns about potential respondent biases simultaneously impacting task complexity and conflict variables (Brannick, Chan, Conway, Lance, & Spector, 2010). Future studies can address this shortcoming by including task complexity in their full models.

With this study, I contribute to the literature by showing that when task complexity is high, task conflict can improve team performance, thus resolving some of the previously found conflicting results. Moreover, the longitudinal analysis shows that this positive impact only exists if it is experienced early on during the team's task. While the theorizing applies strategic initiative teams at large, the implications overreaching to some of the fundamental assumptions that researchers make regarding task contexts. Overall, I contribute to the literature by beginning to tease apart some of moderators and temporal relationships that are missing in literatures surrounding team behaviors in general, and task complexity and intrateam conflict in particular.

APPENDIX A

SURVEY MEASURES

Team Performance (Cross-sectional at time 3):
Thinking of your experience with your simulation team through the six-rounds of decision making, please answer the following questions. (1 Not at all – 7 Very much)

1. How satisfactory did you find your team's performance based on simulation results?
2. How satisfactory did you find your team's performance on the project as a whole? (e.g. Meeting of deadlines, decision-making, etc.)
3. How willing would you be to undertake a future group project with your simulation team?

Task Conflict (Longitudinal, Jehn, 1995):
Please think of your experiences with your team during the ***(1st, 3rd or 6th)*** round of decision-making in the simulation as you answer the following questions.
To what extent do you agree with the following regarding the behavior of your simulation team? (1 Not at all – 7 A lot)

1. How often people in your project team disagreed about opinions regarding the work being done?
2. How frequently were conflicts about ideas in your team?
3. How much conflict about the work you do was there in your team?
4. To what extent were there differences of opinion in your team?

Relationship Conflict (Longitudinal, Jehn, 1995):
Please think of your experiences with your team during the ***(1st, 3rd or 6th)*** round of decision-making in the simulation as you answer the following questions.
To what extent do you agree with the following regarding the behavior of your simulation team? (1 Not at all – 7 A lot)

1. How much friction was there among members in your team?
2. How much were personality conflicts evident in your team?
3. How much tension was there among members in your team?
4. How much emotional conflict was there among members in your team?

Simulation Proficiency/Learning (Longitudinal):
At this point in the simulation, to what extent do you agree with the following statements? (1 Not at all – 7 A lot)

1. We are comfortable with the mechanics of the simulation.
2. We won't have software related issues when implementing our decisions.
3. We know how the simulation works.

Task Complexity (Cross-sectional at time 3, i.e. Comp1)

To what extent do you agree with the following regarding the behavior of your simulation team in this class? (1 Strongly disagree – 7 Strongly agree)

1. Earlier in the simulation, there were more choices available to us with respect to where and how to compete.
2. Compared to earlier rounds, we can now better predict what our competitors will do.
3. Compared to earlier rounds, I feel more certain about predicting the results of our own actions.

Task Complexity (Longitudinal, i.e. Comp2)

At this point in the simulation, to what extent do you agree with the following statements? (1 Not at all – 7 A lot)

1. We are aware of the actions that our competitors might take.
2. We know the strategies of our competitors.

APPENDIX B

PAPERS REVIEWED

Method[a]	Paper	Variation			Selection			Initiative Outcomes		Retention		Theoretical Contribution
		External Environment	Individuals & Groups	Organizational Factors	External Environment	Strategic Initiative	Organizational Factors	Selection	Retention	External Environment	Organizational Learning	
C	Burgelman (1983a)		✓	✓		✓	✓				✓	Provides a conceptual model of induced and autonomous strategic behaviors; reconciles the arguments of "strategy follows structure" and "structure follows strategy".
QL	Burgelman (1983b)	✓	✓			✓		✓	✓			Successful internal efforts depend on the availability of autonomous entrepreneurial activity by operational level participants, the ability of MMs to conceptualize the strategic implications of these initiatives in more general system terms, and on the capacity of UM to allow viable entrepreneurial initiatives to change the corporate strategy.
C	Burgelman (1983c)		✓	✓			✓				✓	Firms need diverse initiatives to survive and this diversity comes from autonomous actions of operational level managers. These auto. initiatives are transformed in to strategies by MMs. Top managers should put emphasis on the recognition of viable strategies as well as creating a balance of diversity in initiatives rather than focusing on the specific content of entrepreneurial activity.
QL	Maidique & Zirger (1985)					✓					✓	Focuses on learning-by-failing alongside learning-by-doing (improvement of internal process) and learning-by-using (improvement through customer usage). Discusses how learning is limited when firms succeed due to the complacency that follows and how firms can benefit if they can investigate why their products failed. Authors argue that successes and failures are more likely as the firm moves away from its existing markets. Learning essentially is both intra- and inter- organizational and depends on long-term relationships with internal actors but also customers, suppliers, etc.
C	Mintzberg & Waters (1985)	✓	✓	✓								Identifies strategies along a continuum of purely deliberate and purely emergent (although not likely to be at either extreme). Describes the notions of unrealized and realized strategies. Creates a typology of strategies based on the extent to which organizations are structured, driving forces behind change, leadership and how strategies fall on the above continuum.
P	Takeuchi & Nonaka (1986)			✓	✓	✓	✓				✓	Authors argue that new product development depends on several key factors: Built-in instability that allows for radical thinking, Self-organizing project teams that provide autonomy, self-transcendence, cross-fertilization, overlapping development phases that allow for communication between different employees and departments responsible for different phases, Multi-level and multi-functional learning from the environment, Subtle organizational controls and Organizational transfer of learning.

P	Sykes (1986)			✓		✓	✓					Offers general guidelines and advice for handling internal venturing operations. Difficulties stem from too much investment in high R&D projects, lack of experience in relevant industries and too much corporate involvement in projects. Building on existing competencies, using high R&D projects as support establishment rather then using them for diversification, learning to balance independece of venture with employee understanding of the need for eventual integration to larger organization are some of the lessons learned.
QL	Burgelman (1991)		✓	✓		✓	✓				✓	Proposes the intraorganizational ecology perspective to evaluating strategic initiatives. Identifies strategic renewal as a form of adaptation, guided by autonomous initiative, resulting in major changes preceded by experimentation and selection.
QL	Simons (1991)		✓				✓					Explores the circumstances in which managers use different types of control systems as catalysts for new strategic initiatives (boundary systems, belief systems, diagnostic control systems, interactive control systems). Depending on whether the manager was attempting revolutionary or evolutionary change, the use of systems changed.
QT	Zahra (1991)	✓		✓								This study identifies potential environmental, strategic, and organizational factors that may help increase or decrease corporate entrepreneurship.
QT	Ancona & Caldwell (1992a)					✓		✓	✓			Functional diversity of new product teams increased outside communication and tenure diversity improved internal processes. However, diversity decreased team performance (whether measured by adherence to budgets/schedules, innovation or self-rated).
Mix.	Ancona & Caldwell (1992b)					✓		✓	✓			Teams undertake one the four main strategies for external activities at their boundaries: attempt to gain support, coordinate and scout information, gain support and coordinate (w/o scouting), and isolate themselves. Patterns of these activities predict performance.
Mix.	Garud & van de Ven (1992)				✓	✓	✓					Action persistence (propensity of an entrepreneur to continue despite negative outcomes) increases when ambiguity and slack resources are present. Moreover, action persistence is accompanied by an insulation from internal sponsors as well as the external environment, whereas trial-and-error learning happens when they are open to these sources of influence.
C	Leonard-Barton (1992)			✓		✓						Capabilities and rigidity towards innovation create a paradox towards new product development: creating new products require utilizing capabilities but also not be constrained by them. Research shows that these paradoxes are resolved by abandonment; recidivism, i.e. return to core capabilities; reorientation; and isolation.
QT	Russell & Russell (1992)	✓		✓								Innovation norms, degree of decentralization in organizational structure, and environmental uncertainty explained significant variance in entrepreneurial strategy (the extent to which firm puts importance on and relative frequency of product innovation).

P	Garwin (1993)			✓		✓	✓					Describes the process in which strategic manufacturing initatives should be developed - a capability development initiative aimed at improving overall efficiency of manufacturing. SMIs are not a part of manufacturing policies - might be inconsistent with existing strategy - thus drive change and continuous improvement in the organization. Organizational priorities will drive manufacturing policy (focus on cost, quality, flexibility etc.) and SMIs can focus on the specific drivers of these foci (such as operating costs as part of cost focus, or conformance to standards as part of quality).
P	Gerwin (1993)			✓								Discusses the importance of incorporating manufacturing department to the front-end of product development and how manufacturing managers could impact design decisions and act as liasons for later stages of manufacturing.
C	Hornsby, Naffziger, Kuratko & Montagno (1993)	✓	✓	✓								Decision to act intrapreneurially depends on organizational (management systems, rewards, work discretion..) and individual characteristics (risk taking, motivation for achievement..) as well a precipitating event (environmental change).
QT	Morris, Avila & Allen (1993)			✓								Organizational culture impacts entrepreneurial behavior: specifically the extent to which an organization's culture emphasizes collectivism decreases entrepreneurial activity.
C	Simon (1993)			✓								Competitive advantage is transient; organizational decision making practices such as strategic planning must focus on new ideas, alternatives and opportunities. This kind of thinking must permeate the entire organization for it success.
QL	Burgelman (1994)				✓	✓	✓	✓		✓	✓	Distinctive competences can create inertia but also can create innovations that allow the firm to make strategic exits to new product markets. External pressures might be reflected in middle managers' autonomous behaviors and if these pressures are accurately reflected in the internal selection environment, a strategic exit might be possible. Top managers' recognition play a critical role in strategic exits, and strategic exits provide a basis for organizational learning of competences.
QT	Day (1994)		✓			✓						Identifies dual-role champions (those who act as sponsors and champions) in addition to bottom-up and top-down initiators. Finds that innovation is higher when championed by a TMT member of a lower-level non-corporate staff (corporate staff championing is associated with less innovation). Dual role champions are also associated with innovative projects.
QL	Ezzamel (1994)						✓					Resistance to change initiatives: Mobilizing technical and outside knowledge to argue against change initiatives in terms of expectations and ethical and professional underpinnings.
QT	Morris, Davis & Allen (1994)			✓								Too much individualism or collectivism in an organization decreases corporate entrepreneurship.
QL	Simons (1994)		✓	✓			✓					Management control systems act as agents of intended and emergent change; new top managers shape MCS, according to their vision and strategy, to overcome inertia, communicate the priorities, establish timetables and targets, and create incentives.

P	Bartlett & Ghoshal (1995)		✓	✓								The departure from traditional, top-down planning and control systems to more bottom-up initiaitve is suggested in a people centered entrepreneurial model
P	DeSimone (1995)	✓		✓	✓	✓						Suggestions are made how companies can keep their entrepreneurial spirit alive by referring to best practices at 3M.
QT	Ginsberg & Venkatraman (1995)	✓		✓								Changes in the institutional environment will push managers to address these changes in their own firms. Their responses will depend on whether the change is a threat or opportunity, and can be intra or inter organizational, with varying degrees of commitment.
P	Ghoshal & Bartlett (1995)		✓	✓		✓	✓					To enable renewal, new structures and new top managers roles are required
QL	McGrath (1995)					✓			✓		✓	The extent to which an initiative can capture high firm worth, market worth, and competitive insulation can predict its possible future success. Article also provides 8 processes that can allow the venture team to learn from failed initiatives.
QT	McGrath, Macmillan & Venkatraman (1995)					✓		✓				Comprehension (understanding critical cause and effect relationships) and deftness (the extent to which a team can solve problems effortlessly and effectively) impact competence development as measured by meeting objectives regarding budgets, deadlines, quality, etc.
P	Simons (1995)			✓			✓					Four controls (belief systems, boundary systems, diagnostic systems and interactive systems) are suggested as levers of strategic renewal.
P	Craig (1996)	✓	✓	✓	✓	✓	✓					Discusses using bureaucracy both as an instigator for innovation and change while maintaining overall stability. Describes how Japanese brewers created structures units for product development, implemented procedures to gather customer information, and overall provided a systematic approach to innovation. Moreover efforts to change corporate attitudes through overcomeing barriers to cross-functional collaboration, implementing new control and reward systems and providing a new message helped innovative activity and overcame inertia.
QL	Craig (1996)	✓		✓			✓					Successful responses to a changing environment (in this case hypercompetition) required a change in the organizational context including a shift of power among functions, creation of effective communication in new product development, and creating a culture where new products are celebrated. These changes, identified as new product development capability, provided a temporary competitive advantage until others were able to catch up.
C	Lumpkin & Dess (1996)	✓	✓	✓								Conceptual paper that investigates entrepreneurial orientation as a multi-dimensional construct. Theorizes on the entrepreneurial orientation-performance relationship based on contingencies such as organizational structure, environmental factors and TMT characteristics.
P	Lynn, Morone, & Paulson (1996)			✓		✓			✓			Proposes experiemention as variation and discusses organizational learning through experimental products and refinement over time. Notes that learning will impact variation and selection.

QL	Noda & Bower (1996)			✓		✓		✓			✓	Strategic and structural contexts both influence bottom-up initiative processes. Top managers are constrained by the organizational context in business development, even though they are the ones who set it up. Under high uncertainty regarding an initiative, early results generate a (de)escalation of strategic commitment. Corporate strategy is the result of incremental continuous learning and changes in the strategic context precede changes in official articulation of strategy.
QT	Pisano (1996)					✓		✓				This article focuses on learning-by-doing and learning-before-doing, i.e. specifically experimentation /testing /etc. before a product is mass-produced or a process is implemented. Argues that the extent to which a process can be learned before full implementation depends on the nature of the technology. In environments where there is significant accumulation of theoretical and practical knowledge, learning-before-doing might help firms decrease costs (they might be able to anticipate future uncertainties better). For emerging technologies, actual implementation becomes a critical venue for learning where certain concerns cannot be answered without being in the real production environment.
P	Strebel (1996)						✓					Change initiatives fail frequently because employees, both at high and low levels, resist change. Author notes that the only way to get around this is to make sure employees buy in-to the change through first understanding the requirement for such change, and then creating a new personal compact that formally and informally revises the expectations of their individual commitments.
QT	Zahra (1996)	✓								✓		Industry conditions (hostility, dynamism and heterogeneity) impact the type of innovative activity that organizations undertake and also moderate initiative-performance relationship.
QL	Birkinshaw (1997)		✓	✓						✓	✓	Subsidiary initiative taking can promote local responsiveness as well as global learning and integration. Moreover, different types of initiatives -based on intended outcomes- develop differently depending on facilitating conditions (such as autonomy, communication and resources) and processes (issue selling and approval)
QT	Boeker (1997)		✓									Past experiences of managers impact new product market entry decisions in their new organizations. This effect is stronger when they have technical backgrounds and greater industry experience. However, this effect is smaller when the focal organization's TMT is large or long tenured.
Mix.	Dutton, Ashford, O'Neill, Hayes & Wierba (1997)	✓	✓	✓								Organizational and environmental context are important for middle managers in their propensity to undertake championship behaviors. Individual factors, such as political vulnerability and distant relationships with top managers also impact issue selling.
QL	Hargadon & Sutton (1997)	✓				✓					✓	Focal firm's experience in designing products for clients allow them to be exposed to many technologies and solutions and become a holder of knowledge. Past solutions remain in organizational memory to be accessed later and combinations of existing ideas become solutions for new products and designs.

Mix.	Thomke (1997)				✓	✓		✓				Flexibility of product/process design has significant impact for initiative performance, especially under uncertain environments. Flexible designs allow for rapid changes during development process whereas inflexibility requires more resource investment so that such changes would not be required (or the risk of change is minimized).
QT	Bidault, Despres & Butler (1998)	✓		✓								An early study about the integration of suppliers into product development processes. Empirical evidence presented shows that this integration helps them design their products by improving costs/quality as well as handling some of the innovation work. Moreover such integration extend beyonds automative industry and organizational choices, more than environmental or cultural factors, impact the decision to integrate suppliers into the design of products.
QT	Birkinshaw, Hood & Jonsson (1998)	✓		✓								Autonomy, subsidiary leadership, subsidiary culture, global industry, specialized resources impact the number of different initiatives subsidiaries undertake. Moreover, they also impact the extent to which subsidiaries contribute to the global corporation (e.g. activities it undertakes for the global corporation as a whole)
QL	den Hond (1998)	✓			✓	✓			✓	✓		Investigates generation of variety in innovation. Through a case study of pesticide manufacturing, finds that variation occurs through different search heuristics used in the industry. Selection environment is composed of regulations as well as customers, however there is no linkage between "solutions" provided by variation, and the "problems" of the selection envrionment. While many trials are undertaken through variation, actual selection occurs when a solution fits a problem (garbage-can). This interaction creates a trajectory that influences new variation, but does not ensure success for future fit.
P	Lynn (1998)				✓	✓	✓				✓	Describes organizational learning through teams: within teams by learning-by-doing, between team knowledge transfer and from the external market through suppliers, customers. All types of innovation requires learning but if disruptive innovation, between teams and from market types should be limited to allow high exploration and cross-team learning is best when exploiting the same market.
QT	Xie, Song & Stringfellow (1998)				✓	✓	✓		✓			Avoidance strategy in conflicts between different functions during new product development have negative impact on product success, whereas collaboration and compromise help it. While the impact of competition on success is culturally dependent, its interaction with interfunctional conflict helps effectiveness of the competitive method. National culture has consequences in conflict management and new product development.
QT	Beise & Stahl (1999)	✓		✓								Results of a large scale German survey show that research activity undertaken by public institutions (universities, research labs, etc.) impact firm innovation, especially new product development. Approximately 9% of new product introductions would have been delayed by at least one year if not for publicly funded research. However, results also show that benefitting from such external research requires absorbtive capacity in the form of internal R&D capabilities.

P	Hanfield, Ragatz, Petersen & Monczka (1999)	✓			✓							Discusses the importance of involving suppliers at variation and selection stages. Argues that if the initiative is more complex, earlier integration - for example for idea generation is crucial, where for simpler or less complex projects later stages such as prototyping/full scale manufacturing might be sufficient.
QT	Hansen (1999)					✓	✓					Investigates interunit ties and knowledge transfer. Finds that weak interunit ties help search for useful knowledge and speed up projects when the knowledge is not complex. When knowledge is complex, teams require strong ties for knowledge transfer and speed.
Mix.	Hitt, Nixon, Hoskisson & Kochnar (1999)				✓	✓	✓					Investigates the importance of team context for cross-functional new product development teams. While the team in question was initially promising (functional diversity, past experiences with each other, enthusiasm for the project), political considerations created barriers to cohesion. Important considerations for team success include shared values, communication between team members, top management team support, input from suppliers/customers.
QT	Thomas III & Waring (1999)	✓										Investigates the effect of institutional environment on capital investment: Home country environment causes differences in strategy choices: U.S. firms have lower investment rates in physical capital than do the coalitional firms of Japan and Germany; U.S. firms make investments based on expected returns, Japanese and German firms make investments based on available resources.
C	Zahra, Nielsen & Bogner (1999)	✓		✓		✓		✓			✓	Proposes a cyclical process model of knowledge development and competence building through corporate entrepreneurship.
P	Abrahamson (2000)		✓	✓		✓					✓	The term dynamic stability is coined to illustrate that stable periods should follow times of change. Organizations must use existing resources as a starting point, remember lessons from past tinkering, internally experiment, and hire generalists from outside who can drive change.
P	Beer & Nohria (2000)		✓	✓	✓	✓	✓				✓	A combination of hard approaches ("theory E" for economic value for shareholders) and soft approaches (theory "O" for corporate culture and human capability) is suggested to be best for change and renewal.
P	Day & Schoemaker (2000)	✓		✓			✓					What is the difficulty in addressing emerging technologies by incumbent firms? To overcome this issue, firms need to be proactive in engaging with the new technology (i.e. their strategy should be fully committed and persistent in following and exploring new technologies). This requires them to investgiate peripheral developments, experiment with different options and increase flexibility, and restructure new projects for protection against existing culture. The firm also needs to learn a mindset of being undertanding to new alternatives, challenging the status quo and experimentation.
C	Floyd & Lane (2000)	✓	✓	✓		✓						Identifies the strategic roles of managers at all levels of the organization during different type of renewal initiatives. Describes the role conflict that stems from the inconsistency between role expectations in deploying existing capabilities and developing new ones. Describes the contingent conditions of the environment when organizational control that can contain these role conflicts.

P	Jassawalla & Sashittal (2000)					✓	✓					Importance of team leaders in new product development teams: they play several roles in the product development process such as ensuring commitment from members, facilitating cross-functional collaboration, interact and (occasionally) shield the team from senior management and organizational bureaucracy, and provide a learning environment. Senior managers must also influence a culture of innovation where such team leaders can emere and operate.
QL	Lovas & Ghoshal (2000)	✓	✓	✓	✓	✓	✓			✓	✓	Expands on the intraorganizational ecology model and the role the top management plays in 'guided evolution'. Identifies social and human capital as the second unit of analysis (with strategic initiatives) as employees are sources of variation as well as agents for selection and retention.
QT	Ramus & Steger (2000)		✓	✓								A well-communicated environmental policy positively impacts employees' willingness to promote ecoinitiatives. Supervisory support behaviors encouraging environmental innovation, competence building, communication, rewards and recognition, and management of goals and responsibilities had a statistically significant impact on employee willingness to promote ecoinitiatives. Overall, shows that organizational policies and individual behaviors promote certain types of initiatives.
QL	Rosenbloom (2000)		✓	✓								A case study investigating how core rigidities (or persistence in old practices) lead to a crisis for a market leader undergoing revolutionary technological change. Shows the importance of leadership when a new management team leads fundamental organizational transformation.
QT	Zahra, Neubaum & Huse (2000)		✓	✓								The extent to which CEOs and external board members own stock in a company positively impacts its entrepreneurial orientation whereas stock ownership by pressure sensitive organizations (i.e. public pension funds, foundations) decreases it.
QT	Antoncica & Hisrich (2001)	✓		✓								Organizational characteristics and environmental characteristics impact the level of intrapreneurship at an organization.
QT	Keller (2001)					✓		✓				The impact of functional diversity on new product development team outcomes (cohesiveness, technical quality, schedule/budget performance). Functional diversity improves technical issues and adherence to budgets/schedules but decreases cohesiveness.
QT	Lovelace, Shapiro & Weingart (2001)					✓		✓				Functional diversity increases the likelihood of team disagreements however, the extent to which these disagreements will impact performance depends on communication, expression of task issues and effectiveness of the team leader.
QL	Maritan (2001)		✓			✓	✓					Different types of initiatives (the extent to which they add, maintain or create capabilities) undergo different decision making processes. Compared to new capability development, add/maintain projects follow a sequential decision making process, have higher procedural rationality that is less political and less direct involvement from upper management. However, project success does not depend on initiative type.

QT	McGrath (2001)					✓	✓	✓	✓			When the initiative is exploratory, goal autonomy is positively associated with learning effectiveness whereas when it is exploitative it has a negative impact. Similarly, exploratory initiatives call for greater supervision autonomy for effective learning.
QT	Subramaniam & Venkatraman					✓	✓		✓			A fit between tacit knowledge about overseas markets and team characteristics (composition, use of communication) drives transnational new product development capabilities.
QT	Azulay, Lerner & Tishler (2002)	✓	✓									Authors investigate entrepreneurial behavior in an organization in the defense industry. They find that intrapreneurs are less likely to support defense conversions (usage of defensive military technology in civilian contexts) and the potential barriers to conversion might be mediating this relationship. Moreover, while employees perceived top management to be somewhat committed to defensive conversion, individuals in management positions did not support this issue. Overall, results suggest that for a specific issue, barriers to innovation and top management commitment (instead of "lip service") might impact the types of intrapreneurial activity.
QL	Burgelman (2002)		✓	✓			✓		✓			A CEO's strategic vision, coupled with fortuitous industrial context, can create a successful induced strategy process. However, this process becomes an impediment and creates inertia for autonomous strategic behavior.
P	Cross, Borgatti & Parker (2002)			✓			✓				✓	Explores the importance of social networks both within and between organizations.The importance of social networks goes beyond hierarchical relationships but individual networks and are instrumental in promoting collaboration with imporant groups, getting support in critical junctions from different hierarchical/geographical regions, and ensuring integration across initiatives. As such not only informal networks help selection but impact future variation through collaboration and integration.
QL	Danneels (2002)	✓					✓		✓			Product innovation as linking of technology and customer competences. New product development process requires a simultaneous understanding of customers as well as technological capabilities. New products are categorized according to the extent to which they leverage existing competences with respect to technology and markets thus they are not just pure exploration or pure exploitation rather depends on the extent to which a firm uses its competences regarding customers as well as technology.
P	Heifetz & Linsky (2002)					✓					✓	This paper suggests a practical survival guide for leaders and specific individual guidelines for managers handling change initiatives.
P	Hess, Rogovsky & Dunfee (2002)	✓		✓	✓	✓	✓					Argues that corporate social initiatives goes above and beyond just philantrophy but are most effective when grounded in core competencies. As such they become an important part of corporate strategy, both for market development but also addressing the needs of the moral marketplace and stakeholders
P	Hirschhorn (2002)	✓	✓	✓	✓	✓	✓				✓	Overcoming organizational inertia requires the alignment of three campaigns which shall be simultaneously started: a 'political' campaign to form alliances and shift structures, a 'marketing' campaign to listen employees and customers, and a 'military' campaign to secure attention, test projects, and rapid response.

QL	Marginson (2002)			✓			✓	✓				Top management uses belief systems and administrative controls to impact strategic behavior within the firm. While belief systems act as a filter to evaluate ideas, administrative controls impact the location and magnitude of the activity. Use of performance metrics introduce biases in favoring certain initiatives over others.
C	Nambisan (2002)	✓				✓						Identifies the roles that customers play in new product development: generating ideas as well as cocreating them with the firm (testing, providing user support etc.). New technologies create an environment in which the exploitation of customer knowledge shifts towards cocreating knowledge with the customer.
P	Wolpert (2002)	✓			✓							Tap into the pool of externals and specifically so-called "intermediaries" (e.g., baby-boomer retirees) to find solutions and to implement some of your ideas you may not be able to pursue yourself.
QT	Davila (2003)					✓	✓	✓	✓			Short-term economic incentives (in the form of variable compensation) to new product managers are found to have a positive but diminishing relationship with new product performance. Furthermore, this relationship is contingent upon project uncertainty; when faced with high (low) uncertainty must be accompanied by low (high) short term incentives due to the difficulty (ease) of creating reliable output measurement metrics.
P	Goldenberg, Mazursky, Horowitz & Levav (2003)			✓							✓	Argues that innovation on new products should neither be incremental changes that add little on existing ones or radical changes that are far away from existing capabilities. Argues that existing products should be starting point for new ones and suggests five different patterns of creating new products that are in related to existing capabilities but far from existing ones that customers would be willing to change their own patterns.
QT	Green, Welsh & Dehler (2003)				✓	✓	✓	✓				Advocacy by management, performance judgments, and thresholds for performance were related to termination decisions. Contextual factors (technical experience, technological environment, resource investment) impact these relationships. Overall, authors find that advocacy by management is the most important factor in termination decisions.
P	Kim & Mauborgne (2003)					✓	✓				✓	Focus on process fairness in driving change; this needs engagement, explanation and expectation clarity.
P	Lovallo & Kahnemann (2003)	✓			✓							To counter the natural tendency of executives to exxagerate the benefits of strategic initiatives and be more realistic, do not oppress pessimistic voices and get an outside view
QT	Lee, Smith & Grimm (2003)					✓					✓	Radicality (the extent to which a product is different from the market norms) and scope (expected customer audience) of new products positively impact the speed and the extent to which others in the environment adapt to these changes by imitating

P	Matta & Ashkenas (2003)					✓	✓					Big projects fail because there might be "white space" in planning due to uncertainty and unknowns, as well as lack of proper execution and integration across multiple section of the project. Authors suggest dividing large initiatives to smaller micro-initiatives that can be designed to be implemented rapidly, in smalls scale with results-oriented expectations. They caution, however, to have a balance between traditional projects and micro ones, as organizations can benefit from economies of scale and lower overall costs.
P	Royer (2003)					✓	✓					Why are bad projects difficult to kill. Author argues beyond managerial incompetence or bureaucracy, widespread belief among managers on the inevitability of their projects' ultimate success also plays a role; suggesting that the enthusiasm and conviction that spearheads initiative development may have a dark side. Remedies include avoiding groupthink through team selection, and creating and adhering to rules and regulations that are put in place to make sure of initiative viability over time. Article focuses on the importance of "exit champions" who can shatter the persisting collective beliefs about failed initiatives.
QL	Salvato (2003)			✓			✓					Core micro strategies - which are resources and routines stemming from past successful and unsuccessful experiences - are at the core of successful strategic initiatives. When (re)combined with new routines and resources, they form the basis for new initiatives and innovation.
QT	Alegre-Vidal, Lapiedra-Alcamí & Chiva-Gómez (2004)			✓								This paper investigates the extent to which firm innovative activities are consistent with firm operational capabilities. Finds that firms whose operations emphasize quality and operatlional flexibility tend to be more innovative.
QL	Bresnen, Goussevskaia & Swan (2004)			✓				✓			✓	Successful implementation of strategic change initiative depends upon organizational structure: project based organizations allow for innovation but relative autonomy (decentralization, short-term emphasis on project performance and distributed work practices) impede adoption of new practices by other units.
QT	Henderson & Stern (2004)							✓		✓	✓	Investigates the relationship between internal selection of a new product and external selection of the firm for product/organization survival. Internal selection negatively impacts the likelihood that the environment will kill off the entire organization and its products. However, if external or internal environments selects out a product, organization responds by increasing internal selection rates which then improve the probability of future product/organization survival
QT	Dushnitsky & Lenox (2005)	✓		✓							✓	Authors focus on the impact of corporate venture investments on firm innovation. Results show that corporate ventures help increase innovation, however this relationship is dependent upon the extent to which intellectual property protection is weak in a given industry. In industries where intellectual property is higly protected, this benefit is not observed. Moreover, ability to benefit from corporate venturing requires absorptive capacity but its impact is non-monotonic such that while some expertise is required to benefit from knowledge spillovers from CVC's, too much overlap does not provide additional benefit.

QL	Ezzamel & Burns (2005)						✓					Strategic initiatives can become an internal tool of volatility and turbulence as different functional professionals clash over the adoption of new control systems that shift power from one group to another. Each group attempted to legitimize their claims by arguing that their expertise is distinctive, holistic and rational whereas the opposing group is painted as being focused on a single pejorative and having political undertones.
QT	Hansen, Mors & Løvås (2005)					✓	✓					Investigates the impact of social networks in access to sought knowledge as well as the cost of acquiring it. Looks at characteristics both within subsidiary (density, strength) and intersubsidiary networks (size, strength, perceived competition). Within subsidiary density and strength reduced the likelihood of seeking knowledge from other subsidiaries but did not impact costs. Network size positively impact the probability of seeking knowledge, and network strength and competition increases search costs. Transfer costs are high when there is competition and they are low when tacit knowledge is transferred across strong ties.
P	Kaplan, Norton & Sher (2005)			✓			✓					Argues for the need for an office of strategy management who will act as the "chief of staff" to the CEO and plan, manage and communicate strategy. Authors make the point that formulation and execution of strategies are disconnected and, unlike planning departments, an office of strategy management should take a leadership role in executing initiatives.
P	Neilson, Pasternack & Van Nuys (2005)			✓			✓					Authors investigation into organizations led them to create a classification of 7 organization types, from the healthy and adaptive "resilient" organizations to unhealty and rigid "passive-aggressive" ones. Passive aggressive organizations are usually characterized by unclear authority lines, misleading goals and agreement without cooperation making it difficult for organizational change to occur. These organizations require new blood, change in structures and rewards, need better communication and clear-cut decision-making processes.
QL	Ravasi & Turati (2005)					✓	✓					New venture development as virtuous (vicious) cycle of learning that impacts commitment of time, attention and resources: the possession of related-knowledge base, the degree of perceived causal indeterminacy, the degree of control of the process and the perceived uncertainty of returns.
p	Sirkin, Keenan & Jackson (2005)					✓	✓					Success of change initiatives depend on the duration (how the initiative milestones are scheduled and reviewed), integrity (the fit between team member skills and traits and initiative requirements), commitment from the upper management to the initiative and effort from those who are involved.
QT	Smith, Collins & Clark (2005)		✓	✓								Team level (education, functional heterogeneity, social networks) and organizational level (climate for risk taking, climate for teamwork) characteristics positively impact the ability to create and exchange knowledge which is also positively related to new product and service introductions.

P	Suarez & Lanzolla (2005)						✓			✓	✓	Discusses the conflicting findings regarding first mover advanatage. Authors argue that the extent to which a first mover can be successful depends on the relative change in technology and the markets. Stable environments due to limited change in technology and markets tend to provide both short and long term advantage to the first-movers whereas change, especially in technology, limits the extent to which first movers enjoy an advantage. Along with the external environment, achieving first mover advantage also requires fitting internal capabilities (such as brand awareness, marketing and production capabilities, R&D).
P	Weiss & Hughes (2005)					✓						Organizations need to promote cross-functional collaboration across internal borders, however they usually fail to do so. Root cause of this problem is conflict stemming from differences in perspectives, access to information, strategic focus or competences. Authors argue that the solution is not just about structuring the organization for collaboration through team work, rather through active participation from all involved, in the resolution of conflict by adhering to certain conflict management strategies.
QL	Bhardwaj, Camillus & Hounshell (2006)	✓	✓	✓							✓	Unlike problemistic search, future expectations regarding current markets can initiate a search for new domains. Move to new domains from existing ones are usually made on the basis of inaccurate transitional levers (for example availability of an in-house requirement might start search in a new product domain). Greater knowledge of the domain creates more searches quickly and produces more opportunities in a short period of time.
QT	Kellermanns & Eddleston (2006)	✓	✓	✓								Finds that perceived opportunities in the environment and willingness to change positively impact corporate entrepreneurship in family firms. When generational involvement is low, strategic planning helps improve corporate entrepreneurship.
QT	Schulze & Hoegl (2006)					✓		✓	✓			Four knowledge creation modes of socialization, externalization, combination, and internalization have different impacts on project team success depending on when they are experienced (during concept phase vs. development phase) and they are not necessarily cyclical in nature.
P	Breene, Nunes & Shill (2007)			✓			✓					Article investigates the critical, jack-of-all trades, role that chief strategy officers (and their offices) play in strategy making as well as initiative formation and implementation.
QL	Burgelman & Grove (2007)	✓		✓	✓		✓				✓	Strategic leadership is the key in balancing autonomous and induced strategic behavior. In line with the environmental changes, corporate survival depends on coincidence of strategic leadership and the ongoing cycles of induced and autonomous strategic behavior to constantly renew the organization.
QL	Corbett, Neck & DeTienne (2007)					✓		✓			✓	Investigates how entrepreneurs learn from failed new product initiatives and links cognitive scripts to termination decisions. Undisciplined termination (underdeveloped and quick decision to terminate) and innovation drift (allowing the project to drift without killing it after it is obvious that the project is a failure) are scripts that do not allow for learning either due to underdevelopment or the lag between experience and termination. Strategic termination allows for learning

P	Gratton & Erickson (2007)					✓						Four team traits (large size, diversity, virtuality, and high educational levels) are described as crucial but also potentially problematic; eight suggestions are made how to avoid these problems.
QT	Jensen, Johnson, Lorenz & Lundvall (2007)			✓								Looks at four clusters of firms: those that undertake minimal learning, those that use more explicit technological learning, those that use more tacit learning by doing, and those that undertake both explicit and tacit kinds. Those that undertake both have better innovative performance.
QT	Li, Bingham & Umphress (2007)				✓	✓	✓		✓			Perceived procedural justice of TMT decisions positively impact collaborative problem solving in new product development teams which in turn improves new product performance. The relationship between TMT decisions and problem solving is contingent on environmental uncertainty and perceptions of the project group's organizational commitment.
QT	Pappas & Wooldridge (2007)		✓			✓	✓					Middle managers' divergent activity depends upon their internal social network characteristics. Finds that network centrality as well as boundary spanning roles of middle managers impact divergent activity in terms of idea generation, initiative development, and strategic reintegration.
QT	Simsek, Veiga & Lubatkin (2007)	✓		✓								Discretionary slack positively impacts corporate entrepreneurship. Slack also mediates the relationship between environmental complexity and munificence and corporate entrepreneurship.
P	Bonabeau, Bodick & Armstrong (2008)			✓			✓					Argues that the new product development process should not be considered as a monolithic giant, rather divided into two stages with different goals in mind: early and late. Early stages are characterized by different goals (experimentation, promise for novelty, etc.) vs late stage characterized by product/market orientation and efficiency. Authors suggest that the organizational support for these two stages should differ as the main goals (viability/novelty of innovation vs. efficiency and commericalization) are different.
P	Cash, Earl & Morison (2008)			✓			✓					Authors argue that innovation for new products, services and markets and integration across multiple units to improve performance and efficiency are two compelling sources for growth. Article proposes the formation of two groups within the organizational structure, a distributed innovation group and an enterprise integration group. The earlier one should be charged with internal and external scanning, idea generation and early incubation for novel initiatives. The second one is to be charged with managing integration initiatives and serve as a center of expertise for process management and improvement.
P	Fryer & Stewart (2008)	✓	✓	✓			✓					In this interview with Cisco`s CEO John Chambers, the advantage of recognizing trends by early-warning signals are discussed. The challenge of managing multiple initiatives lies in independence and collaboration within the organization.

QL	Kaplan (2008)					✓						Strategic decision making at the initiative level depended upon conflict that stemmed from competing cognitive frames of participants. These frames are the accumulation of individual experiences (functional, training, industry, firm, etc.), and throughout the political process, actors attempt to claim legitimacy of their own frames as well as undertaking frame alignment practices (bridging, amplifying, extending, and transforming) to gain support from neutral actors as well counteract opponents.
QT	Roper, Du & Love (2008)	✓		✓		✓						Authors investigate different types of knowledge how they impact process/product innovations. They find that internal knowledge (in-house R&D) and external knowledge sources (public, customer, supplier, competitor) have strong complementarity effects. While all sources of knowledge except public sources (universities) impact product innovation decisions, process innovations are driven by internal, competitor and supplier knowledge. Innovation activity positively impacts sales and employment growth.
QL	Schmickl & Kieser (2008)					✓						While it is assumed that initiatives require siginificant cross-functional knowledge exchange, some argue that this is inefficient. Authors undertake a case study to understand how much knowledge exchange occurs in innovation projects between specialists from different functions. They find that high innovation requires more knowledge exchange, however it is still limited in scope to interdependencies. Most projects rely on a combination of transactive memory systems, modularization and prototyping without needing costly extensive knowledge transfers.
QT	Schulze & Hoegl (2008)					✓						Investigates the issue of idea generation for novel products from a knowledge creation perspective. Based on Nonaka and colleagues work, empricial findings show that socialization and internalization positively impacts novelty whereas externalization and combination have negative impacts. These findings suggest that, when novelty is important, early design phases of innovative activity does not benefit from formalized interactions or existing knowledge.
P	Ford & Ford (2009)		✓			✓						Resistance to change is normal and should be considered as a form of feedback and thus a core resource; it should be transferred into a productive conversation.
P	Getz (2009)		✓	✓								Investigates F-Form organizations: Individuals have the freedom and responsibility to to take actions as they decide in order to help organization as they see fit. F-form organizations, and the liberating leaders that manage them, provide a vision and an environment so that employees own the organization. Such liberating leaders value freedom, responsibility, and wisdom.
QT	Heavey, Simsek, Roche & Kelly (2009)	✓	✓									Comprehensiveness of the TMT decision-making increases corporate entrepreneurship. This relationship is stronger under stable environments, for low risk takers and for proactive TMTs.
QT	Hornsby, Kuratko, Shepherd & Bott (2009)		✓	✓								Investigates the relationship between managers' perceptions of the organizational environment and the number of implemented entrepreneurial ideas for managers at different structural levels. With TMT support, higher level managers can implement higher number of ideas, work discretion does not help lower-level managers to implement new ideas (but does so for higher levels).

QL	Keil, McGrath & Tukiainen (2009)					✓	✓				✓	While the conventional focus is to evaluate ventures based on initiative performance, authors find that ventures are temporary conduits for capability development and have a primary role in launching new capability life cycles. Thus main contribution of many ventures was to transfer capabilities within the existing business units. The benefit from ventures is independent of their commercial success.
QT	Kim & Pennings (2009)					✓					✓	Advertising and endorsements of innovative products, which are argued to decrease uncertainty and risk in the eyes of the customers, push competitors to imitate the organization that acts as a change agent in the market.
QL	Narayanan, Colwell & Douglas (2009)		✓			✓	✓					Shows that managers undertake initiatives due to their cognitive orientations, and that senior managers imprinting the organization with their cognitive orientations and then orchestrate organizational routines to realize a capability. These actions lead to the creation of a capability that is not yet encapsulated in the cognitive frames of lower level employees.
QT	Strang & Jung (2009)										✓	This paper investigates the diffusion of a voluntary improvement project, initially developed by the corporate headquarters, in a large organization. Finds that adoption of new quality practices by different business units depend on employment conditions, but only when white- and pink-collar workers are distinguished.
C	Zahra, Filatotchev & Wright (2009)		✓									Absorptive capacity of managers as well as their level of accountability to the boards of directors impact the extent to which a firm undertakes entrepreneurial action.
QT	Ambos, Andersson & Birkinshaw (2010)			✓					✓		✓	What are the outcomes of initiative taking in MNCs? Initiative taking by subsidiaries increase headquarters attention which itself increases subsidiary influence. A dilemma is found: past initiatives increase monitoring as well as the level of autonomy, however monitoring is negatively related to subsidiary autonomy. Thus, while the direct effect is significant, the positive impact on autonomy is dampened by increased monitoring.
P	Govindarajan & Trimble (2010)					✓	✓					Innovation initiatives should be run through a dedicated team as well as a "performance engine" which engages with the parts of the project relating to ongoing projects. The dedicated team composition is vital for success as both insiders and outsiders are needed for fresh views. There needs to be total collaboration between the team and the performance engine to solve the inevitable conflict that would arise, and team leaders should hope to have the support of senior executives who can balance the needs for current operations as well as future goals.
P	Grönlund, Sjödin & Frishammar (2010)	✓				✓	✓					Discusses the importance of external environment for selection while focusing on the innovation. Modifies and discusses the stage-gate model for open innovation where certain activities need to be undertaken (stage) and then evaluated for further progress (gate).
QT	Hoang & Rothaermel (2010)					✓	✓		✓			Finds support for the notion that new product development alliances are best aimed at gaining access to partners' resources and capabilities to reap gains from specialization. Moreover a firm's internal exploration experience plays a key role in enhancing the benefits from engaging in exploitation alliances.

QT	Kijkuit & Ende (2010)		✓	✓								Investigates the importance of social networks (size, density, seniority) at the front end of the new product development projects. Large networks help initiate a project but networks shrink as projects become more refined. Strong ties and high density of the network both help initiate and develop projects.
QT	Lechner, Frankenberger & Floyd (2010)					✓	✓	✓				Centrality, tie strength and structural holes have an inverted-U shaped relationship with initiative performance, such that while central location in a network helps, too much embeddedness negatively impacts initiative performance. These relationships are moderated by the content of the strategic initiative such that the negative impact is higher when the initiative is more exploratory.
QL	Lechner & Kreutzer (2010)				✓		✓		✓		✓	Identifies four modes of coordination - based on the extent to which processes and initiative content is coordinated - for effective management of growth initiatives. These modes are characterized by the extent to which decision making is centralized, formalization of operating procedures and formality of social relations and dependent upon environmental characteristics
P	Miles (2010)						✓				✓	The author suggests remedies for six speed brakes that hinder organizational transformation (such as unengaged employees and executives, cautious and established management practices, loss of focus during implementation and an overcrowded initiative pipeline),
QT	Monsen, Patzelt & Saxton (2010)		✓	✓		✓						Profit sharing positively impacts the likelihood that an employee would be willing to participate in a new venture. High risk with respect to pay or job security, or low probability of success decreases this positive impact.
QL	Taylor (2010)			✓		✓	✓	✓			✓	Internal competition between strategic initiatives influence existing-technology product development groups to integrate the new technology into the next generation of their own products. Thus internal competition is not necessarily harmful, even if the stand-alone new initiative does not succeed, it allows for the adoption of new technology by others.
QL	Thrane, Blaabjerg & Møller (2010)	✓	✓	✓	✓	✓	✓					Path dependence is usually seen as a technological/competence based barrier to the types of innovation that can be achieved. However, authors argue that path dependence is dependent upon both the available technology as well as the innovative approach that the organization takes. Through a qualitative study identifies three cognitive frames that could be identified as different approaches to innovation (product focused, market focused, champion driven). The interaction of technological and innovative path creation drives new product development - intermediaries such as external actors (other firms and their available technology), market conditions, and organizational structures/constraints facilitate this interaction.
Mix.	Cardinal, Turner, Fern & Burton (2011)				✓	✓			✓	✓		Priorities in the technical environment impact the performance dimensions that new product development teams attended. These performance criteria then become inputs for product design which then impact actual performance. The fit of design and environment can occur but depends on the pressure and/or capacity to change the design.
C	Cornelissen, Holt, & Zundel (2011)					✓						Framing of a strategic change initiative to stakeholders should depend on the type of initiative (additive vs. substitute changes) to gain support and legitimize strategic change.

QL	Danneels (2011)					✓				✓		This study examined how the firm used the various modes of resource alteration: leveraging, creating, accessing, and releasing resources. The firm was not able to alter its resources to offer competitively viable new products because managerial cognition regarding consumers and their brand did not meet environmental factors.
QT	Danneels & Sethi (2011)	✓		✓		✓						Willingness to cannibalize a product line and future oriented market scanning increases the level of exploration in new products. However, these relationships contingent on environmental turbulence.
QT	De Clercq, Castañer & Belausteguigoitia (2011)		✓									Issue selling is positively impacted when managers perceive an idea to benefit the organization and is inline with current practices. Moreover, issue selling is more likely when an individual expects rewards and are personally satisfied with their organization.
QL	Huy (2011)					✓			✓			Addressing identities and emotions of organizational members impact implementation of strategic initiatives. Research should focus at cognitive and emotional aspects of strategy implementation holistically.
QT	McKelvie, Haynie & Gustavsson (2011)	✓				✓						Decomposes environmental uncertainty into uncertainty regarding the rate and predictability of technology and demand as well as its expectations regarding responses to competitors and ability to sustain innovative leadership in the market. Finds that most of the uncertainty categories have a negative relationship with willingness to act, however response uncertainty has the most significant negative impact. Size of a product launch moderates these relationships.
C	Ren & Guo (2011)	✓	✓	✓		✓						Investigates the attention given by middle managers to different types of entrepreneurial opportunities (exploration vs. exploitation). Argues that middle manager attention is constrained by corporate strategy, planning and slack resources and fit with strategic alignment is important for consideration. Middle managers adjust their strategies for issue selling when they can identify predictable or unpredictable events in and around the organization called policy windows.
P	Tushman, Smith & Binns (2011)		✓	✓								Organizational ambidexterity must reside at the top of the organization: the challenges of maintaining core operations while trying to innovate should not be left to the business units but must be actively embraced by the senior team. This way would allow for a strategic conversation relating to the future of the organization rather than the negotiation of feudal interests of different groups in the organization. This interest at the top should be reflected in the organizational structure and systems.
Mix.	Battilana & Casciaro (2012)		✓			✓	✓		✓			The richer in structural holes a change agent's network, the more likely the agent is to initiate a change that diverges from the institutional status quo. As the initiative diverges from the institutional status quo, more closure in a change agent's network of contacts diminishes the likelihood of adoption. Structural holes in a change agent's network aid the adoption of changes that diverge from the institutional status quo, but hinder the adoption of less divergent changes.

QT	Cappelen, Raknerud & Rybalka (2012)	✓				✓						This paper investigates how external funding - tax credits - can impact firm innovative activity. Empirical results show that one such Norwegian tax scheme led to increased innovation in the form of new production processes and new products for the firm but not new product introductions to the market. Authors suggest that adjustments to the parameters of the tax scheme might impact their outcomes.
Mix.	Ethiraj, Ramasubbu, & Krishnan (2012)		✓	✓		✓						Investigates the impact of customer demands on innovation regarding existing products. While there is a significant focus on prioritizing customers in the literature, customer request for innovation does not necessarily drive innovative activity. Moreover, the paper shows that if the innovation is complex, or the firm is top-driven, customer demands for incremental innovation will not be met. Individual incentives and meeting environmental demands might also impact innovative activity.
P	Florén & Frishammar (2012)	✓	✓	✓		✓	✓					Argues that front-end failures contribute to firm failures and focuses on the front end of new product development where the outcome is defined as corroborated product definition. This corraborated product definition is the result of idea development and refinement, alignment with the internal and external envvironment and legitimization to create organizational commitment. The specific activities undertaken for each stage also depends on initiative type: radical or incremental.
QT	Kacperczyk (2012)			✓								Investigates the notion that large and mature organizations stifle individual motivation for entrepreneurship. Finds that, while independent entrepreneurial behavior by individuals decreases in large and mature organizations, intrapreneurial activity increases. Moreover, managerial discretion and functional breath is associated with higher levels of intrapreneurial activity.
P	Katzenbach, Steffen & Kronley (2012)					✓	✓					For successfully driving change initiatives leaders must build on their existing firm`s culture`s strengths and focus only on limited changes to it rather than attempting a major transformation.
P	Kotter (2012)			✓			✓	✓	✓			Even effective operating systems are argued to be unable to handle rapid change and situations of high complexity. The author suggests to introduce a second operating system, that uses an agile, network like structure; eight so-called accelerators are suggested.
QT	Lechner & Floyd (2012)					✓	✓	✓	✓			Influence activities such as rational justification and use formal authority positively impacts initiative performance. Coalition building and formal authority have a higher performance impact when the initiative is exploratory.
QT	Shi & Prescott (2012)	✓		✓								Article shows the importance of temporal fit for strategic initiatives. Acquisition initiatives are best managed when they are in between the continuum of evenly spaced to completely irregular. Alliance initiatives should match competitor initiatives.
QT	Simon & Shrader (2012)	✓	✓			✓						Optimistic overconfidence of product success by the top managers was positively related to introducing products that required more resources, were more pioneering or were in hostile environments (but not in dynamic environments).
P	Spradlin (2012)			✓								Spend sufficient time and resources on defining the problems that you are trying to solve by using a four-step process: clarifying, articulating, researching, and creating.

QT	Archibugi, Filippetti & Frenz (2013)	✓		✓		✓						In general, economic crises negatively impact innovative behavior, but some firms continue to undertake such activity. Specifically those firms are "great innovators" and "fast growing new firms" who take advantage of the the crisis and increase their innovative activity. Moreover, those who continue to innovate tend to have internal R&D departments and undertake more exploratory innovation.
P	Battilana & Casciaro (2013)					✓	✓					Authors investigate the role of social networks in change initiative outcomes. They find that change agents tend to be more successful if they had a central role in informal networks. Moreover, for divergent change a bridging network was helpful whereas for non-divergent change a cohesive network position was better. Authors find that being close to "fence-sitters" for gathering support was more important than being close to endorsers or resisters for both types of change.
QL	Klingebiel & Meyer (2013)					✓						Adaptive decision making during strategic initiative implementation: If managers become aware of the possibility, instead of the certainty, of a relevant future event, they employ selective, deliberate, and diligent decision-making processes. New certainty requires direct plan adaptations, whereas new uncertainty allows for exploration of potential ways of adapting plans.
P	Laurie & Harreld (2013)		✓			✓						Provision of guidelines for leading growth initiatives: executives should be involved in the details of business model development; put their best managers in charge; measure progress, not profits; and hire the best talent available with proof of concept.
QT	Li, Maggitti, Smith, Tesluk & Katila (2013)		✓									The impact of TMT search selection (the location managers select to direct their attention) and search intensity (the persistence and effort of searching) on new product introductions. More diverse search selection and persistence increases new product introductions whereas search effort decreases. Search selection and intensity interact in a complex manner with respect to product introduction rate.
QL	van Oorschot, Akkermans, Sengupta & van Wassenhove (2013)				✓	✓	✓					Examines why it takes teams too long to realize a project is in trouble. Going beyond escalation of commitment and groupthink, argues that information filters cause teams, operating under dynamic and complex environments, to fail to realize the negative events that are occurring during the project lifecycle. The filters (mixed performance outcomes, budget/schedule problems caused by understaffing, responding to delays in current stages by stretching deadlines into future stages) cause teams make teams fall into a decision trap: hard to see wrong decisions through information filters, which in turn makes it difficult to correctly assess the status of the project.
P	Anthony, Duncan & Siren (2014)	✓	✓	✓	✓	✓	✓				✓	Authors discuss how firms can generate a reliable and repeatable innovation process rather than relying on serendipity or individual heroism; an approach to set up a "minimum viable innovation system" is proposed which includes customer needs, organizational capabilities, a dedicated and separate team, and organizational support.
C	Chintakananda & McIntyre (2014)					✓				✓		Investigates network effects in market entry. Argues that network effects will be important in deferring or growing in a market in relation to market uncertainty and the availability of a dominant product.

QT	Dahlander & Piezunka (2014)	✓		✓								The paper investigates the issue of organizational innovation and how it might be shaped by external contributors. While we know that external actors, such as customers, provide important suggestions to organizations, these suggestions usually fail when implemented. Authors find that very few organizations are successful in receiving significant numbers of suggestions from external contributors. Thus, the variation that is introduced by external customers might be limited to a large number of firms. However, those that do receive higher numbers of suggestions tend to be proactive and solicit suggestions based on their existing initiatives (especially early in the initative lifecycle), and tend to provide reactive attention to previous sugesstions.
QT	Deichmann & Ende (2014)		✓			✓						Previous failures of initiators improve the likelihood that they will initiate new ideas in the future. However, initiative team member's past participation in successful initiatives is positively related to future resource allocation.
QL	Mirabeau & Maguire (2014)	✓	✓	✓		✓					✓	Identifies how autonomous strategic behavior becomes realized strategy through discursive practices which mobilize support for impetus, alter the strategic context for consonance and alter the structural context for embeddedness.
QT	Nadkarni & Chen (2014)	✓	✓									The degree to which CEOs characteristically devote attention to perceptions of the past, present, and future impacts rate of new product introductions. In stable environments past and present focus increases rate of new products wheras in dynamic environments present and future focus increases this rate.
QL	Canales (2015)					✓	✓					Depending on the initiator of the initiative (CEO, operational managers or MM), its selection will be based upon a combination of the fit with strategic intent and then feasibility. Strategic fit and feasibility create an organizational principle that is used to evaluate initiatives - however the principle is not static, it changes over time.
QT	Covin, Garrett Jr., Kuratko & Shepherd (2015)					✓	✓		✓			Changes in the initial value proposition of an internal venture has an inverted-U shaped relationship with venture performance. This relationship is moderated by market familiarity.
QT	Garrett Jr. & Covin (2015)					✓	✓	✓	✓			Contrary to authors' expectation, independence of ICV operations from the parent is not negatively related to venture performance. However, under conditions of low market familiarity, low opportunity identification score (extent to which it is deliberate) or low planning autonomy, increasing independence of operations decreases venture performance. This suggests that under unfamiliar markets with autonomous initiatives parent knowledge gained through operational dependence can help new ventures.
P	Kim & Mauborgne (2015)		✓									Discusses the role of mental models in keeping firms focused on existing customers/markets rather than opening new ones. Suggests managers to focus on attracting new customers, worry less about segmentation, and understand that market creation does not necessarily require technological innovation or creative destruction.

QT	Kreutzer, Walter & Cardinal (2015)					✓	✓	✓	✓			Contrary to authors' expectation, independence of ICV operations from the parent is not negatively related to venture performance. However, under conditions of low market familiarity, low opportunity identification score (extent to which it is deliberate) or low planning autonomy, increasing independence of operations decreases venture performance. This suggests that under unfamiliar markets with autonomous initiatives parent knowledge gained through operational dependence can help new ventures.
QL	Lê & Jarzabkowski (2015)					✓			✓			Investigates the role of conflict (task and process) in the implementation of a strategic initiative. Ambiguities regarding the content of the initiative trigger task conflict which pushes actors to define elements of the strategy, whereas disagreements regarding the process stimulate process conflict leading to coordination work. This is a recursive ongoing process, however, it can only be effective if managers are aware of conflict and respond to it.
QT	Anand, Mulotte & Ren (2016)						✓		✓		✓	Past experience with specific initiatives or corporate development activities help for future initiative performance. However, this positive impact is nulled when self-selection is taken into account; i.e. repeating similar initiatives help firms learn but firms select choices because they have been successful in the past.
P	Birkinshaw & Haas (2016)										✓	The fear of failure is presented as the main reason for problems in achieving growth targets. It is suggested to learn from failure by extracting and documenting the benefits of blown projects.
QL	Dörrenbächer & Gammelgaard (2016)		✓			✓	✓					Subsidiaries need to engage in issue selling to adopt new technologies, enter into new markets or develop its product portfolio. To do so they undertake lobbying and attempt to attract headquarters attention with numbers, past successes or avoiding negative attention. While issue selling helps the subsidiary, however, it is of secondary rank: if the subsidiary has power over its parent than issue selling is needed at a minimum. If the power balance is highly asymmetrical against the subsidiary, issue selling activities are not sufficient.
QL	Heinze & Weber (2016)	✓				✓	✓					Investigates the tactics used by intrapreneurs operating under new institutional logics. Intrapreneurs leveraged their own status in getting to positions where they might change the logic, gained proprietary control over resources, created zones where ideas could be exchanged with the incumbent logic (thus increasing understanding and decreasing resistance), built a core group of participants and used experimentation to introduce new ideas and learn from their experiences.
C	Hullova, Trott & Simms (2016)	✓		✓		✓						Conceptual paper that focuses on the complementarities between product and process innovations in process industries (low tech industries where the input and output are materials rather than components; food, metal, paper, etc.). Part literature focused these innovations as sequential, reciprocal or seperate phenomena but this paper develops a classification of complementarities that include all possibilities along a continuum. Develops contingency factors (available technology, power of suppliers, absroptive capacity) that determine the level of complementarity among process and product innovations.

QT	Roper, Micheli, Love & Vahter (2016)					✓			✓			Recent literature suggests than design is an important factor in the performance of new products. This paper investigates the role of design as well as the designers themselves in the NPD process. Empirical results show that employing designers in any capacity in NPD improves sales and product innovation. Moreover, authors find that continuous involvement of designers in the process (rather than just in specific steps) improves product innovativeness and sales.
QT	Schemmann, Herrmann, Chappin &. Heimeriks (2016)	✓				✓						Investigates crowdsourcing of ideas from customers with the specific research focus on the "ideators" and the "idea" characterhistics. Finds that ideas that are innovative, popular or presented by individuals who paid attention to other ideas are more likely to be implemented.
QT	Walter, Lechner & Kellermanns (2016)					✓		✓				Investigates how group level learning (search, process, codify, practice) and the extent to which an initiative is exploratory impacts initiative performance. Finds that learning activities help initiative performance when exploration is high, and have no impact when exploration is low.
QT	Brown, Martinsson & Petersen (2017)	✓										Which policy actions support innovative actions? Stonger accounting standarts and IP protection, and contract enforcement laws help increase R&D activity. Tax credits are helpful, but only for low tech industries. High tec R&D benefits from financing programs and appropriability compared to other policy actions.
QL	Canales & Caldart (2017)	✓		✓	✓		✓	✓				A sense of urgency due to competitive pressure at the firm, simple rules that guide strategic initiative priorities, cross-business integration mechanisms and organizational culture for collaboration are four factors that positively influence the emergence and implementation of cross-business strategic initiatives in multi-business firms.
QT	Chen & Nadkarni (2017)		✓									CEO Temporal leadership, managing different timeframes, actions and speeds, helps advance the extent to which organizationas undertake entrepreneurial activites on innovation, corporate venturing and strategic renewal.
QT	Choi & Lee (2017)	✓										Public funding help stimulate, rather than become a substitute for, innovation spending by firms. But public subsidies do not necessarily generate new product innovations.
QT	Kramer (2017)				✓		✓					In emerging markets, bribery is found to positively impact the ability to introduce new products. However the strength of informal and formal institutions negatively modereate this impact.
P	Manso (2017)			✓								Incentives improve performance when output is easily measurable. But when the output is exploratory innovation, pay incentives do not work as well. If top managers are expected to innovate, failure must be expected and a long term commirtment to the manager must be a part of the employment contract. Innovation is not just a contractual issue, also involves organizational culture.
QT	Moeen (2017)			✓			✓					Author distinguishes between entry to a nascent market and initial investments in that market. While capabilities and complementary assets play a role in entry to nascent market decisions, in fact technical capabilities, complementary assets, and integrative capabilities at the time of initial investment are crucial.

QT	Parker, Crause & Covin (2017)								✓	✓	✓	Quality of new products (either above or below aspirations) decrease the rate of new product introductions. This relationship is moderated by sales as well as stability (with respect to quality) of the product-market.
QL	Pfister, Jack & Darwin (2017)			✓			✓				✓	The research question undertaken is how do middle managers work with performance indicators to strategize open innovation - an innovation model that integrates external actors (such as suppliers or customers) and knowledge sources (buying or licensing of patents) into internal innovative activities. Authors describe how financial and non-financial performance indicators surrounding innovation activities can be used to initiatiate, expand, restrucutre and retain an open innovation strategy.
QT	Rogan & Mors (2017)		✓			✓						Authors investigate the effect of external social networks on managers exploration of new business and new knowledge opportunities. Those who have external ties are more likely to undertake such searches - however, unlike past theory, sparse networks do not help exploration in professional service firms. These firms rely on client knowledge so sparse networks are enable exploration only when number of ties is taken into account.
QL	Wiedner, Barrett, & Oborn (2017)					✓	✓	✓			✓	Strategic change initiatives can create favorable conditions for change for its intended purpose but also create favorable conditions in areas that are away from the location. This is because strategic change initiatives do not just provide resources for change or influence how they are used. They also (intentionally and/or unintentionally) facilitate the use of potential resources across different parts of an organization - however what will be valuable is not known a priori.
QL	Ybema & Horvers (2017)					✓	✓					Authors identify two types of resistance to a change initiative: frontstage resistance that is out-and-open but simultaneously confroming to the changes, and backstage resistance that pays lip service to the intiative but simultaneously resists with indifference, critique and inaction. Both types are simultaneously resistance and compliance Frontstage resistance signals discontent but also provides an alibi for those who keep a compliant appearance. Backstage resistance is more effective though as unobtrusive resistance is more powerful simply because it is unobtrusive and unmanageable.
QT	Barney, Foss & Lyngsie (2018)		✓	✓								Authors find that bottom-up initiatives lead to opportunity formation when the work force is diverse and, despite long standing arguments, when top management is also involved. Overall, findings support the view that senior management must be more involved in the bottom-up process, beyond their usual roles for defining the framework and selection for advancement.
QT	da Cruz (2018)				✓							Crowdfunding is not just an opportunity for an organization to access external funding. Author shows that crowdfunding also signals potential market support and interest in the project - even in the cases of failed funding endeavors.
QT	Deichmann & Jensen (2018)		✓									Working in teams is helpful for developing ideas for new products and processes. This is especially true for radical ideas, however developing ideas in a team also brings in coordination problems as well as sharing of potential rewards.

QT	Haneda & Ito (2018)			✓		✓	✓					Organization and human resource management practices (interdepartmental teams, having board members with an R&D background, assessment of employees with R&D outcomes, and critical location of R&D centers) are more likely to improve product innovation compared to process innovation.
QL	Hannigan, Seidel & Yakis-Douglas (2018)	✓			✓					✓		Open innovation usually depends on verifiable and legitimate sources of knowledge. However, product rumors in high-tech environments also influence stakeholders both internal and external (both for rumors concerning themselves as well as competitors). Rumors influence perceptions regarding product/process features, especially under ambiguity, and are also used to legitimize firm decisions. Outflows of rumors from firms help them manage expectations and selectively reveal information.
P	Hollister & Watkins (2018)			✓			✓					Many organizations get overloaded by initiatives that take up resources and time but offer little synergy to current strategy. Keeping unproductive or unnecessary initiatives hurt productivity, engagement, retention and performance. Solution lies at the creation of clear priorities, guidelines for funding and/or cancellation, and communicating to the organization that a cancelled initiative does not necessarily indicate failure.
C	Hutchison-Krupat (2018)			✓			✓					How can senior management influence employee actions? Authors mathematical model shows that both communication and incentives are helpful in directing employees to undertake desired behaviors regarding initiation and implementation of strategic initiatives. However, communication is only effective when there is significant information asymetry - when employees have sufficient information added communication does not change behaviors.
QT	Kagan, Leider &. Lovejoy (2018)						✓					Complete decision making autonomy, for transitioning from ideation to implementation stages, at the hands of designers of a project is not beneficial for performance; external deliverable goals or transition times improve performance.
QT	Mazzelli, Kotlar & De Massis (2018)	✓		✓								Family firms are less likely to introduce new products compared to non-family firms. However, family firms conform to institutional norms more readily thant non-family firms such that they are more likely to introduce new products if their peer group also does.
QT	Morgan, Obal & Anokin (2018)					✓	✓		✓			Customer participation in new product development positively influences innovativeness and performance. But these effects are contingent upon absorbtive capacity.
QL	Pratap & Saha (2018)	✓	✓	✓	✓		✓				✓	Describes a case study in which structural and strategic contexts active within the organization shifted due to a sudden external event (liberalization of Indian economy). Authors describe how tthe way of doing business, shifted away from the practices of powerful managers from elite families to managers who were highly educated in business and engineering but from modest backgrounds.

QT	Schweisfurth (2018)	✓		✓								Customers can be sources of new ideas and embedding their experience as internal lead users can be very beneficial for firms. Paper investigates the utility of internal lead users compared to external lead users, or ordinary employees and customers in new idea generation. Internal lead users are found to generate ideas with higher originality and user value (compared to ordinary customers and employees). However, external ideas exceed internal users in these dimensions as they are not constrained by organizational knowledge schemas. Both types of lead users provide ideas with high market potential.
QT	Shi, Connely & Cirik (2018)	✓					✓					Investors short selling activities negatively impact both the number and diversity of growth initiatives pursued by firms. This negative impact, however, can be mitigated by high levels of absorbtive capacity, board members with outside connections, and finacial slack.
QT	Tarakci, Ates, Floyd, Ahn & Wooldridge (2018)		✓									Both individual and organizational level social aspirations of middle managers impact the degree to which they search and champion divergent strategic initiatives. This behavior is moderated by their organizational identification, those that identify highly with the organization pay more attention to organizational level aspirations.
QT	Wang & Chen (2018)					✓			✓			Capability streching - the extent to which an organization needs to develop new technologies to be incorporated for new products - negatively impacts new product survival. However, capability streching also enables technological breakthroughs. Vertical integration increases this negative impact whereas horizontal boundaries decreases it due to spillover effecs.
QL	Zimmermann, Raisch & Cardinal (2018)				✓	✓	✓		✓			Senior managers are expected to design organizational structures that would handle the conflicting pressures stemming from ambidexterous orientations. Authors show the role front line managers play for strategic initiatives that attempting to pursue exploration and exploitation simultaneously. Handling ambidextreous tensions is a dynamic process for frontline managers, requring different ongoing practices.
QT	Boone, Lokshin, Guenter & Belderbos (in press)	✓	✓									TMT nationality diversity increases the level of corproate entrepreneurship in multi-national corporations. However, this positive impact only occurs where culture stresess equality between individuals (i.e. low power distance & low TMT stratification).
C	Crama, Sting & Wu (in press)						✓					Cooperative behavior across initiatives can help initiative success. Authors model an organizational system that provides a formalized helping mechanism. The model shows that a formal system may or may not be effective for a given level of free-rider problems encountered. However, this system can be optimized to provide benefits for both the initiatives led by the helped and the helper.
QT	Danneels & Vestal (in press)			✓							✓	Investigates learning from failure: organizations that are "open to failure" do not experience any benefits from failed attempts. On the contrary those benefit from failures have organization members who extract lessons from failure, and analyze those lessons in an organizational climate that is open for constructive conflict.

QT	Eggers & Suh (in press)					✓					✓	Authors show that negative feedback from new products in new domains pushes companies to exploited domains whereas negative feedback in experienced domains encourage action in both new and existing domains. These wider actions lead to higher performance.
QT	Huang & Jong (in press)	✓			✓							High levels of public funding uncertainties (due to governmental policy changes) negatively impact initiation of R&D projects. However those uncertainties regarding the availability of funding also negatively impact existing projects as it becomes more difficult to find other funding opportunities.
QT	Kotlar & Sieger (in press)		✓	✓								In family firms, non-family managers are less likely to undertake corporate entrepreneurial actions.; this effect is especially strong after the founder leaves the company. However, monitoring, perceived control, role in senior management and distributive justice can safeguard entrepreneurial behaivor by non-family managers.
QL	Sandhu & Kulik (in press)			✓			✓					Describes how organizational structure influences discretion for new managerial roles relating to sustainability. Low centralization coupled with low formalization creates ambiguity and low discretion leading to role conflict for new managers. Under high centralization and high formalization, managerial roles are clear but the extent of managerial discretion is highly controlled. High formalization with decentralization allows discretion and ability to successfully champion initiatives within the organization.

[a] C: Conceptual, Mix.: Mixed Method, QL: Qualitative, QT: Quantitative, P: Practitioner-Oriented

BIBLIOGRAPHY

Abbas, M., Raja, U., Darr, W., & Bouckenooghe, D. 2014. Combined effects of perceived politics and psychological capital on job satisfaction, turnover intentions, and performance. ***Journal of Management***, 40(7): 1813–1830.

Abrahamson, E. 2000. Change without pain. ***Harvard Business Review***, 78(4): 75–79.

Albert, D., Kreutzer, M., & Lechner, C. 2015. Resolving the paradox of interdependency and strategic renewal in activity systems. ***Academy of Management Review***, 40(2): 210–234.

Alegre-Vidal, J., Lapiedra-Alcamí, R., & Chiva-Gómez, R. 2004. Linking operations strategy and product innovation: an empirical study of Spanish ceramic tile producers. ***Research Policy***, 33(5): 829–839.

Amason, A. C. 1996. Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: resolving a paradox for top management teams. ***Academy of Management Journal***, 39(1): 123–148.

Amason, A. C., & Sapienza, H. J. 1997. The effects of top management team size and interaction norms on cognitive and affective conflict. ***Journal of Management***, 23(4): 495–516.

Ambos, T. C., Andersson, U., & Birkinshaw, J. 2010. What are the consequences of initiative-taking in multinational subsidiaries? ***Journal of International Business Studies***, 41(7): 1099–1118.

Anand, J., Mulotte, L., & Ren, C. R. 2016. Does experience imply learning? ***Strategic Management Journal***, 37(7): 1395–1412.

Ancona, D. G., & Caldwell, D. F. 1992a. Demography and design: Predictors of new product team performance. ***Organization Science***, 3(3): 321–341.

Ancona, D. G., & Caldwell, D. F. 1992b. Bridging the boundary: External activity and performance in organizational teams. ***Administrative Science Quarterly***, 37(4): 634–665.

Ancona, D. G., Okhuysen, G. A., & Perlow, L. A. 2001. Taking time to integrate temporal research. ***Academy of Management Review***, 26(4): 512–529.

Anthony, S. D., Duncan, D. S., & Siren, P. M. A. 2014. Build an innovation engine in 90 days. ***Harvard Business Review***, 92(12): 59–68.

Antoncic, B., & Hisrich, R. D. 2001. Intrapreneurship: Construct refinement and cross-cultural validation. ***Journal of Business Venturing***, 16(5): 495–527.

AOM. 2016. ***AOM 2017 Theme: At the Interface***. http://aom.org/uploadedFiles/Meetings/annualmeeting/program/submission/2017_Call_for_Submissions.pdf.

Archibugi, D., Filippetti, A., & Frenz, M. 2013. Economic crisis and innovation: Is destruction prevailing over accumulation? ***Research Policy***, 42(2): 303–314.

Argote, L., & Greve, H. R. 2007. A behavioral theory of the firm — 40 years and counting: Introduction and impact. ***Organization Science***, 18(3): 337–349.

Atsmon, Y., & Smit, S. 2015. Why it's still a world of "grow or go." ***McKinsey Quarterly***, (4): 14–18.

Azulay, I., Lerner, M., & Tishler, A. 2002. Converting military technology through corporate entrepreneurship. ***Research Policy***, 31(3): 419–435.

Baer, M., Dirks, K. T., & Nickerson, J. A. 2013. Microfoundations of strategic problem formulation. ***Strategic Management Journal***, 34(2): 197–214.

Barnard, C. I. 1938. ***The functions of the executive***. Cambridge: Harvard University Press.

Barnett, W. P., & Burgelman, R. A. 1996. Evolutionary perspectives on strategy. ***Strategic Management Journal***, 17(S1): 5–19.

Barney, J. 1991. Firm resources and sustained competitive advantage. ***Journal of Management***, 17(1): 99–120.

Barney, J. B., Foss, N. J., & Lyngsie, J. 2018. The role of senior management in opportunity formation: Direct involvement or reactive selection? ***Strategic Management Journal***, 39(5): 1325–1349.

Barney, J., Ketchen, D., & Wright, M. 2011. The future of resource-based theory: Revitalization or decline? ***Journal of Management***, 37(5): 1299–1315.

Bartlett, C. A., & Ghoshal, S. 1995. Changing the role of top management: Beyond systems to people. ***Harvard Business Review***, 73(3): 132–142.

Battilana, J., & Casciaro, T. 2012. Change agents, networks, and institutions: A contingency theory of organizational change. ***Academy of Management Journal***, 55(2): 381–398.

Battilana, J., & Casciaro, T. 2013. The network secrets of great change agents. ***Harvard Business Review***, 91(7/8): 62–68.

Baum, J. A. C., & Shipilov, A. W. 2006. Ecological approaches to organizations. In S. R. Clegg, C. Hardy, T. B. Lawrence, & W. R. Nord (Eds.), ***The SAGE Handbook of Organization Studies*** (2nd ed.): 55–110. London: SAGE.

Beer, M., & Nohria, N. 2000. Cracking the code of change. ***Harvard Business Review***, 78(3): 133–141.

Beinhocker, E. D., & Kaplan, S. 2002. Tired of strategic planning? ***McKinsey Quarterly***, (2): 48–57.

Beise, M., & Stahl, H. 1999. Public research and industrial innovations in Germany. ***Research Policy***, 28(4): 397–422.

Bentler, P. M. 1990. Comparative fit indexes in structural models. ***Psychological Bulletin***, 107(2): 238–246.

Bidault, F., Despres, C., & Butler, C. 1998. The drivers of cooperation between buyers and suppliers for product innovation. ***Research Policy***, 26(7–8): 719–732.

Bidwell, M. 2009. Do peripheral workers do peripheral work? Comparing the use of highly skilled contractors and regular employees. ***Industrial & Labor Relations Review***, 62(2): 200–225.

Bidwell, M. J. 2012. Politics and firm boundaries: How organizational structure, group interests, and resources affect outsourcing. ***Organization Science***, 23(6): 1622–1642.

Biemann, T., Cole, M. S., & Voelpel, S. 2012. Within-group agreement: On the use (and misuse) of rWG and rWG(J) in leadership research and some best practice guidelines. ***The Leadership Quarterly***, 23(1): 66–80.

Birkinshaw, J. 1997. Entrepreneurship in multinational corporations: The characteristics of subsidiary initiatives. ***Strategic Management Journal***, 18(3): 207.

Birkinshaw, J., & Haas, M. 2016. Increase your return on failure. ***Harvard Business Review***, (May): 88–93.

Birkinshaw, J., Hood, N., & Jonsson, S. 1998. Building firm-specific advantages in multinational corporations: the role of subsidiary initiative. ***Strategic Management Journal***, 19(3): 221–242.

Birkinshaw, J., & Mol, M. 2006. How management innovation happens. ***Sloan Management Review***, 47(4): 81–88.

Boeker, W. 1997. Executive migration and strategic change: The effect of top manager movement on product-market entry. ***Administrative Science Quarterly***, 42(2): 213–236.

Bollen, K. A. 1989. A new incremental fit index for general structural equation models. ***Sociological Methods & Research***, 17(3): 303–316.

Bower, J. L. 1970. ***Managing the resource allocation process: A study of corporate planning and investment***. Boston: Division of Research, Graduate School of Business Administration, Harvard University.

Bradley, B. H., Anderson, H. J., Baur, J. E., & Klotz, A. C. 2015. When conflict helps: Integrating evidence for beneficial conflict in groups and teams under three perspectives. ***Group Dynamics: Theory, Research, and Practice***, 19(4): 243–272.

Bradley, B. H., Klotz, A. C., Postlethwaite, B. E., & Brown, K. G. 2013. Ready to rumble: How team personality composition and task conflict interact to improve performance. ***Journal of Applied Psychology***, 98(2): 385–392.

Brannick, M. T., Chan, D., Conway, J. M., Lance, C. E., & Spector, P. E. 2010. What is method variance and how can we cope with it? A panel discussion. ***Organizational Research Methods***, 13(3): 407–420.

Brauer, M., & Heitmann, M. 2013. Antecedents and temporal dynamics of strategic divergence in multinational corporations: Evidence from Europe. ***Journal of World Business***, 48(1): 110–121.

Breene, R. T. S., Nunes, P. F., & Shill, W. E. 2007. The chief strategy officer. ***Harvard Business Review***, 85(10): 84–93.

Breslin, D. 2011. Reviewing a generalized Darwinist approach to studying socio-economic change. ***International Journal of Management Reviews***, 13(2): 218–235.

Breslin, D. 2016. What evolves in organizational co-evolution? ***Journal of Management & Governance***, 20(1): 45–67.

Bresnen, M., Goussevskaia, A., & Swan, J. 2004. Embedding new management knowledge in project-based organizations. ***Organization Studies***, 25(9): 1535–1555.

Brickson, S. L. 2005. Organizational identity orientation: Forging a link between organizational identity and organizations' relations with stakeholders. ***Administrative Science Quarterly***, 50(4): 576–609.

Bromiley, P., & Rau, D. 2014. Towards a practice-based view of strategy. ***Strategic Management Journal***, 35(8): 1249–1256.

Brown, J. R., Martinsson, G., & Petersen, B. C. 2017. What promotes R&D? Comparative evidence from around the world. ***Research Policy***, 46(2): 447–462.

Burgelman, R. A. 1983a. A model of the interaction of strategic behavior, corporate context, and the concept of strategy. ***Academy of Management Review***, 8(1): 61–70.

Burgelman, R. A. 1983b. A process model of internal corporate venturing in the diversified major firm. ***Administrative Science Quarterly***, 28(2): 223–244.

Burgelman, R. A. 1983c. Corporate entrepreneurship and strategic management: Insights from a process study. ***Management Science***, 29(12): 1349–1364.

Burgelman, R. A. 1991. Intraorganizational ecology of strategy making and organizational adaptation: Theory and field research. ***Organization Science***, 2(3): 239–262.

Burgelman, R. A. 1994. Fading memories: A process theory of strategic business exit in dynamic environments. ***Administrative Science Quarterly***, 39(1): 24–56.

Burgelman, R. A. 2002. Strategy as vector and the inertia of coevolutionary lock-in. ***Administrative Science Quarterly***, 47(2): 325–357.

Burgelman, R. A., & Grove, A. S. 2007. Let chaos reign, then rein in chaos - repeatedly: Managing strategic dynamics for corporate longevity. ***Strategic Management Journal***, 28(10): 965–979.

Burns, T., & Stalker, G. M. 1961. ***The management of innovation***. London: Tavistock Publications.

Burrell, G., & Morgan, G. 1979. ***Sociological paradigms and organisational analysis: Elements of the sociology of corporate life***. London: Heinemann.

Campbell, D. J. 1988. Task complexity: A review and analysis. ***Academy of Management Review***, 13(1): 40–52.

Canales, J. I. 2015. Sources of selection in strategy making. ***Journal of Management Studies***, 52(1): 1–31.

Canales, J. I., & Caldart, A. 2017. Encouraging emergence of cross-business strategic initiatives. ***European Management Journal***, 35(3): 300–313.

Cappelen, Å., Raknerud, A., & Rybalka, M. 2012. The effects of R&D tax credits on patenting and innovations. ***Research Policy***, 41(2): 334–345.

Cardinal, L. B. 2001. Technological innovation in the pharmaceutical industry: The use of organizational control in managing research and development. ***Organization Science***, 12(1): 19–36.

Cardinal, L. B., Sitkin, S. B., & Long, C. P. 2004. Balancing and rebalancing in the creation and evolution of organizational control. ***Organization Science***, 15(4): 411–431.

Cardinal, L. B., Turner, S. F., Fern, M. J., & Burton, R. M. 2011. Organizing for product development across technological environments: Performance trade-offs and priorities. ***Organization Science***, 22(4): 1000–1025.

Carmines, E. G., & McIver, J. P. 1981. Analyzing models with unobserved variables: Analysis of covariance structures. In G. W. Bohrnstedt & E. F. Borgatta (Eds.), ***Social measurement: Current issues***: 65–115. Newbury Park, Calif.: Sage.

Carpenter, M. A., Li, M., & Jiang, H. 2012. Social network research in organizational contexts: A systematic review of methodological issues and choices. ***Journal of Management***, 38(4): 1328–1361.

Carroll, G. R. 1984. Organizational ecology. ***Annual Review of Sociology***, 10: 71–93.

Carroll, G. R., & Swaminathan, A. 2000. Why the microbrewery movement? Organizational dynamics of resource partitioning in the U.S. brewing industry. ***American Journal of Sociology***, 106(3): 715–762.

Cash, J. I., Earl, M. J., & Morison, R. 2008. Teaming up to crack innovation & enterprise integration. ***Harvard Business Review***, 86(11): 90–100.

CGMA. 2016. ***Joining the dots: Decision making for a new era***. Chartered Global Management Accountant. http://www.cgma.org/resources/reports/joining-the-dots.html.

Chatman, J. A., & Spataro, S. E. 2005. Using self-categorization theory to understand relational demography–based variations in people's responsiveness to organizational culture. ***Academy of Management Journal***, 48(2): 321–331.

Chen, G., Kanfer, R., DeShon, R. P., Mathieu, J. E., & Kozlowski, S. W. J. 2009. The motivating potential of teams: Test and extension of Chen and Kanfer's (2006) cross-level model of motivation in teams. ***Organizational Behavior and Human Decision Processes***, 110(1): 45–55.

Chen, J., & Nadkarni, S. 2017. It's about time! CEOs' temporal dispositions, temporal leadership, and corporate entrepreneurship. ***Administrative Science Quarterly***, 62(1): 31–66.

Chintakananda, A., & McIntyre, D. P. 2014. Market entry in the presence of network effects: A real options perspective. ***Journal of Management***, 40(6): 1535–1557.

Choi, J., & Lee, J. 2017. Repairing the R&D market failure: Public R&D subsidy and the composition of private R&D. ***Research Policy***, 46(8): 1465–1478.

Colbert, A. E., Kristof-Brown, A. L., Bradley, B. H., & Barrick, M. R. 2008. Ceo transformational leadership: The role of goal importance congruence in top management teams. ***Academy of Management Journal***, 51(1): 81–96.

Connaughton, S. L., & Shuffler, M. 2007. Multinational and multicultural distributed teams: A review and future agenda. ***Small Group Research***, 38(3): 387–412.

Corbett, A. C., Neck, H. M., & DeTienne, D. R. 2007. How corporate entrepreneurs learn from fledgling innovation initiatives: Cognition and the development of a termination script. ***Entrepreneurship: Theory & Practice***, 31(6): 829–852.

Craig, T. 1995. Achieving innovation through bureaucracy: lessons from the Japanese brewing industry. ***California Management Review***, 38(1): 8–36.

Craig, T. 1996. The Japanese beer wars: Initiating and responding to hypercompetition in new product development. ***Organization Science***, 7(3): 302–321.

Criscuolo, P., Dahlander, L., Grohsjean, T., & Salter, A. 2017. Evaluating novelty: The role of panels in the selection of R&D projects. ***Academy of Management Journal***, 60(2): 433–460.

Cross, R., Borgatti, S. P., & Parker, A. 2002. Making invisible work visible: Using social network analysis to support strategic collaboration. ***California Management Review***, 44(2): 25–46.

Cyert, R. M., & March, J. G. 1963. ***A behavioral theory of the firm*** (2nd Ed). Englewood Cliffs, N.J.: Prentice-Hall.

da Cruz, J. V. 2018. Beyond financing: Crowdfunding as an informational mechanism. ***Journal of Business Venturing***, 33(3): 371–393.

Dahlander, L., & Piezunka, H. 2014. Open to suggestions: How organizations elicit suggestions through proactive and reactive attention. ***Research Policy***, 43(5): 812–827.

Danneels, E. 2002. The dynamics of product innovation and firm competences. ***Strategic Management Journal***, 23(12): 1095–1121.

Danneels, E. 2011. Trying to become a different type of company: Dynamic capability at Smith Corona. ***Strategic Management Journal***, 32(1): 1–31.

Danneels, E., & Sethi, R. 2011. New product exploration under environmental turbulence. ***Organization Science***, 22(4): 1026–1039.

Danneels, E., & Vestal, A. 2018. Normalizing vs. analyzing: Drawing the lessons from failure to enhance firm innovativeness. ***Journal of Business Venturing***. https://doi.org/10.1016/j.jbusvent.2018.10.001.

Darwin, C. 1859. ***On the origin of species by means of natural selection, or, the preservation of favoured races in the struggle for life***. London: J. Murray.

Davila, A. 2003. Short-term economic incentives in new product development. ***Research Policy***, 32(8): 1397–1420.

Davis, J. P., & Eisenhardt, K. M. 2011. Rotating leadership and collaborative innovation: Recombination processes in symbiotic relationships. ***Administrative Science Quarterly***, 56(2): 159–201.

Day, D. L. 1994. Raising radicals: Different processes for championing innovative corporate ventures. ***Organization Science***, 5(2): 148–172.

Day, G. S., & Schoemaker, P. J. H. 2000. Avoiding the pitfalls of emerging technologies. ***California Management Review***, 42(2): 8–33.

De Clercq, D., Bouckenooghe, D., Raja, U., & Matsyborska, G. 2013. Unpacking the goal congruence–organizational deviance relationship: The roles of work engagement and emotional intelligence. ***Journal of Business Ethics***, 124(4): 695–711.

De Clercq, D., Castañer, X., & Belausteguigoitia, I. 2011. Entrepreneurial initiative selling within organizations: Towards a more comprehensive motivational framework. ***Journal of Management Studies***, 48(6): 1269–1290.

De Clercq, D., Menguc, B., & Auh, S. 2009. Unpacking the relationship between an innovation strategy and firm performance: The role of task conflict and political activity. ***Journal of Business Research***, 62(11): 1046–1053.

De Dreu, C. K. W., & Nauta, A. 2009. Self-interest and other-orientation in organizational behavior: Implications for job performance, prosocial behavior, and personal initiative. ***Journal of Applied Psychology***, 94(4): 913–926.

De Dreu, C. K., & Weingart, L. R. 2003. Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. ***Journal of Applied Psychology***, 88(4): 741–749.

de Wit, F. R. C., Greer, L. G., & Jehn, K. A. 2012. The paradox of intragroup conflict: A meta-analysis. ***Journal of Applied Psychology***, 97(2): 360–390.

de Wit, F. R. C., Jehn, K. A., & Scheepers, D. 2013. Task conflict, information processing, and decision-making: The damaging effect of relationship conflict. ***Organizational Behavior and Human Decision Processes***, 122(2): 177–189.

Dean, J. W., & Sharfman, M. P. 1996. Does decision process matter? A study of strategic decision-making effectiveness. ***Academy of Management Journal***, 39(2): 368–392.

DeChurch, L. A., Mesmer-Magnus, J. R., & Doty, D. 2013. Moving beyond relationship and task conflict: Toward a process-state perspective. ***Journal of Applied Psychology***, 98(4): 559–578.

Deichmann, D., & Jensen, M. 2018. I can do that alone…or not? How idea generators juggle between the pros and cons of teamwork. ***Strategic Management Journal***, 39(2): 458–475.

Deichmann, D., & van den Ende, J. 2014. Rising from failure and learning from success: The role of past experience in radical initiative taking. ***Organization Science***, 25(3): 670–690.

Deken, F., Carlile, P. R., Berends, H., & Lauche, K. 2016. Generating novelty through interdependent routines: A process model of routine work. ***Organization Science***, 27(3): 659–677.

den Hond, F. 1998. On the structuring of variation in innovation processes: A case of new product development in the crop protection industry. ***Research Policy***, 27(4): 349–367.

DeSimone, L. D., Hatsopoulos, G. N., O'Brien, W. F., Harris, B., & Holt, C. P. 1995. How can big companies keep the entrepreneurial spirit alive? ***Harvard Business Review***, 73(6): 183–189.

Dess, G. G., Ireland, R. D., Zahra, S. A., Floyd, S. W., Janney, J. J., et al. 2003. Emerging issues in corporate entrepreneurship. ***Journal of Management***, 29(3): 351–378.

Dierdorff, E. C., Bell, S. T., & Belohlav, J. A. 2011. The power of "we": Effects of psychological collectivism on team performance over time. ***Journal of Applied Psychology***, 96(2): 247–262.

DiMaggio, P. J., & Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. ***American Sociological Review***, 48(2): 147–160.

Dörrenbächer, C., & Gammelgaard, J. 2016. Subsidiary initiative taking in multinational corporations: The relationship between power and issue selling. ***Organization Studies***, 37(9): 1249–1270.

Dushnitsky, G., & Lenox, M. J. 2005. When do incumbents learn from entrepreneurial ventures?: Corporate venture capital and investing firm innovation rates. ***Research Policy***, 34(5): 615–639.

Dutton, J. E., Ashford, S. J., O' Neill, R. M., Hayes, E., & Wierba, E. E. 1997. Reading the wind: How middle managers assess the context for selling issues to top managers. ***Strategic Management Journal***, 18(5): 407–423.

Earley, P. C., & Gibson, C. B. 1998. Taking stock in our progress on individualism-collectivism: 100 Years of solidarity and community. ***Journal of Management***, 24(3): 265–304.

Eggers, J. P., & Suh, J.-H. 2018. Experience and behavior: How negative feedback in new bersus experienced domains affects firm action and subsequent performance. ***Academy of Management Journal***. https://doi.org/10.5465/amj.2017.0046.

Eisenhardt, K. M., & Bourgeois, L. J. 1988. Politics of strategic decision making in high-velocity environments: Toward a midrange theory. ***Academy of Management Journal***, 31(4): 737–770.

Eisenhardt, K. M., & Zbaracki, M. J. 1992. Strategic decision making. ***Strategic Management Journal***, 13: 17–37.

Eisenhardt, K., & Martin, J. 2000. Dynamic capabilities: What are they? ***Strategic Management Journal***, 21(10/11): 1105–1121.

Espinosa, J. A., Slaughter, S. A., Kraut, R. E., & Herbsleb, J. D. 2007. Familiarity, complexity, and team performance in geographically distributed software development. ***Organization Science***, 18(4): 613–630.

Ethiraj, S. K., Ramasubbu, N., & Krishnan, M. s. 2012. Does complexity deter customer-focus? ***Strategic Management Journal***, 33(2): 137–161.

Ezzamel, M. 1994. Organizational change and accounting: Understanding the budgeting system in its organizational context. ***Organization Studies***, 15(2): 213.

Ezzamel, M., & Burns, J. 2005. Professional competition, economic value added and management control strategies. ***Organization Studies***, 26(5): 755–777.

Farh, C. I. C., Lanaj, K., & Ilies, R. 2017. Resource-based contingencies of when team–member exchange helps member performance in teams. ***Academy of Management Journal***, 60(3): 1117–1137.

Farh, J.-L., Lee, C., & Farh, C. I. C. 2010. Task conflict and team creativity: A question of how much and when. ***Journal of Applied Psychology***, 95(6): 1173–1180.

Felin, T., Foss, N. J., Heimeriks, K. H., & Madsen, T. L. 2012. Microfoundations of routines and capabilities: Individuals, processes, and structure. ***Journal of Management Studies***, 49(8): 1351–1374.

Felin, T., Foss, N. J., & Ployhart, R. E. 2015. The microfoundations movement in strategy and organization theory. ***The Academy of Management Annals***, 9(1): 575–632.

Felin, T., & Hesterly, W. S. 2007. The knowledge-based view, nested heterogeneity, and new value creation: Philosophical considerations on the locus of knowledge. ***Academy of Management Review***, 32(1): 195–218.

Finkelstein, S., Hambrick, D. C., & Cannella, A. A. 2009. ***Strategic leadership: Theory and research on executives, top management teams, and boards***. New York: Oxford University Press.

Florén, H., & Frishammar, J. 2012. From preliminary ideas to corroborated product definitions: Managing the front end of new product development. ***California Management Review***, 54(4): 20–43.

Floyd, S. W., & Lane, P. J. 2000. Strategizing throughout the organization: Managing role conflict in strategic renewal. ***Academy of Management Review***, 25(1): 154–177.

Floyd, S. W., & Wooldridge, B. 1997. Middle management's strategic influence and organizational performance. ***Journal of Management Studies***, 34(3): 465–485.

Floyd, S. W., & Wooldridge, B. 2000. ***Building strategy from the middle: Reconceptualizing strategy process***. Thousand Oaks, Calif.: Sage.

Follett, M. P., Urwick, L., & Metcalf, H. C. 1941. ***Dynamic administration***. London: Pitman.

Ford, J. D., & Ford, L. W. 2009. Decoding resistance to change. ***Harvard Business Review***, 87(4): 99–103.

Fotaki, M., & Hyde, P. 2015. Organizational blind spots: Splitting, blame and idealization in the National Health Service. ***Human Relations***, 68(3): 441–462.

Friesl, M., & Kwon, W. 2017. The strategic importance of top management resistance: Extending Alfred D. Chandler. ***Strategic Organization***, 15(1): 100–112.

Funk, C. A., & Kulik, B. W. 2012. Happily ever after: Toward a theory of late stage group performance. ***Group & Organization Management***, 37(1): 36–66.

Garrett Jr., R. P., & Covin, J. G. 2015. Internal corporate venture operations independence and performance: A knowledge-based perspective. ***Entrepreneurship: Theory & Practice***, 39(4): 763–790.

Garud, R., & Van de Ven, A. H. 1992. An empirical evaluation of the internal corporate venturing process. ***Strategic Management Journal***, 13(S1): 93–109.

Garvin, D. A. 1993. Manufacturing strategic planning. ***California Management Review***, 35(4): 85–106.

Garvin, D. A. 2004. What every CEO should know about creating new businesses. ***Harvard Business Review***, 82(7/8): 18–21.

Gavetti, G., Greve, H. R., Levinthal, D. A., & Ocasio, W. 2012. The behavioral theory of the firm: Assessment and prospects. ***The Academy of Management Annals***, 6(1): 1–40.

Gersick, C. J. G. 1988. Time and transition in work teams: Toward a new model of group development. ***Academy of Management Journal***, 31(1): 9–41.

Gerwin, D. 1993. Integrating manufacturing into the strategic phases of new product development. ***California Management Review***, 35(4): 123–136.

Ghoshal, S., & Bartlett, C. A. 1995. Changing the role of top management: Beyond structure to processes. ***Harvard Business Review***, 73(1): 86–96.

Gibson, C. B., & Birkinshaw, J. 2004. The antecedents, consequences, and mediating role of organizational ambidexterity. ***Academy of Management Journal***, 47(2): 209–226.

Ginsberg, A., & Venkatraman, N. 1995. Institutional initiatives for technological change: From issue interpretation to strategic choice. ***Organization Studies***, 16(3): 425–448.

Goldenberg, J., Mazursky, D., Horowitz, R., & Levav, A. 2003. Finding your innovation sweet spot. ***Harvard Business Review***, 81(3): 120–129.

Govindarajan, V., & Trimble, C. 2010. Stop the innovation wars. ***Harvard Business Review***, 88(7/8): 76–83.

Grant, R. M. 1996. Toward a knowledge-based theory of the firm. ***Strategic Management Journal***, 17(Winter): 109–122.

Grant, R. M. 2003. Strategic planning in a turbulent environment: Evidence from the oil majors. ***Strategic Management Journal***, 24(6): 491–517.

Gratton, L., & Erickson, T. J. 2007. 8 ways to build collaborative teams. ***Harvard Business Review***, 85(11): 100–109, 153.

Green, S. G., Welsh, M. A., & Dehler, G. E. 2003. Advocacy, performance, and threshold influences on decisions to terminate new product development. ***Academy of Management Journal***, 46(4): 419–434.

Greve, H. R. 2008. A behavioral theory of firm growth: Sequential attention to size and performance goals. ***Academy of Management Journal***, 51(3): 476–494.

Grönlund, J., Sjödin, D. R., & Frishammar, J. 2010. Open innovation and the stage-gate process: A revised model for new product development. ***California Management Review***, 52(3): 106–131.

Guler, I. 2007. Throwing good money after bad? Political and institutional influences on sequential decision making in the venture capital industry. ***Administrative Science Quarterly***, 52(2): 248–285.

Gully, S. M., Joshi, A., Incalcaterra, K. A., & Beaubien, J. M. 2002. A meta-analysis of team-efficacy, potency, and performance: Interdependence and level of analysis as moderators of observed relationships. ***Journal of Applied Psychology***, 87(5): 819–832.

Guth, W. D., & MacMillan, I. C. 1986. Strategy implementation versus middle management self-interest. ***Strategic Management Journal***, 7(4): 313–327.

Hærem, T., Pentland, B. T., & Miller, K. D. 2015. Task complexity: Extending a core concept. ***Academy of Management Review***, 40(3): 446–460.

Haerem, T., & Rau, D. 2007. The influence of degree of expertise and objective task complexity on perceived task complexity and performance. ***Journal of Applied Psychology***, 92(5): 1320–1331.

Hambrick, D. C. 1994. Top management groups: A conceptual integration and reconsideration of the "team" label. In B. M. Staw & L. L. Cummings (Eds.), ***Research in Organizational Behavior.***, vol. 16: 171–214. Greenwich, CT: JAI Press.

Hambrick, D. C., & Mason, P. A. 1984. Upper echelons: The organization as a reflection of its top managers. ***Academy of Management Review***, 9(2): 193.

Handfield, R. B., Ragatz, G. L., Petersen, K. J., & Monczka, R. M. 1999. Involving suppliers in new product development. ***California Management Review***, 42(1): 59–82.

Haneda, S., & Ito, K. 2018. Organizational and human resource management and innovation: Which management practices are linked to product and/or process innovation? ***Research Policy***, 47(1): 194–208.

Hannan, M. T., & Freeman, J. 1977. The population ecology of organizations. ***American Journal of Sociology***, 82(5): 929–964.

Hannigan, T., Seidel, V. P., & Yakis-Douglas, B. 2018. Product innovation rumors as forms of open innovation. ***Research Policy***, 47(5): 953–964.

Hansen, M. T. 1999. The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits. ***Administrative Science Quarterly***, 44(1): 82–111.

Hansen, M. T., Mors, M. L., & Løvås, B. 2005. Knowledge sharing in organizations: Multiple networks, multiple phases. ***Academy of Management Journal***, 48(5): 776–793.

Hargadon, A., & Sutton, R. I. 1997. Technology brokering and innovation in a product development firm. ***Administrative Science Quarterly***, 42(4): 716–749.

Harrison, D. A., & Klein, K. J. 2007. What's the difference? Diversity constructs as separation, variety, or disparity in organizations. ***Academy of Management Review***, 32(4): 1199–1228.

Hart, S. L. 1992. An integrative framework for strategy-making processes. ***Academy of Management Review***, 17(2): 327–351.

Harzing, A.-W., & Alakangas, S. 2016. Google Scholar, Scopus and the Web of Science: A longitudinal and cross-disciplinary comparison. ***Scientometrics***, 106(2): 787–804.

Heavey, C., Simsek, Z., Roche, F., & Kelly, A. 2009. Decision comprehensiveness and corporate entrepreneurship: The moderating role of managerial uncertainty preferences and environmental dynamism. ***Journal of Management Studies***, 46(8): 1289–1314.

Heinze, K. L., & Weber, K. 2016. Toward organizational pluralism: Institutional intrapreneurship in integrative medicine. ***Organization Science***, 27(1): 157–172.

Helfat, C. E. 1997. Know-how and asset complementarity and dynamic capability accumulation: The case of R&D. ***Strategic Management Journal***, 18(5): 339–360.

Helfat, C. E., & Martin, J. A. 2015. Dynamic managerial capabilities: Review and assessment of managerial impact on strategic change. ***Journal of Management***, 41(5): 1281–1312.

Henderson, A. D., & Stern, I. 2004. Selection-based learning: The coevolution of internal and external selection in high-velocity environments. ***Administrative Science Quarterly***, 49(1): 39–75.

Hess, D., Rogovsky, N., & Dunfee, T. W. 2002. The next wave of corporate community involvement: Corporate social initiatives. ***California Management Review***, 44(2): 110–125.

Hirschhorn, L. 2002. Campaigning for change. ***Harvard Business Review***, 80(7): 98–104.

Hitt, M. A., Nixon, R. D., Hoskisson, R. F., & Kochhar, R. 1999. Corporate entrepreneurship and cross-functional fertilization: Activation, process and disintegration of a new product design team. ***Entrepreneurship: Theory & Practice***, 23(3): 145–167.

Hodgson, G. M., & Knudsen, T. 2004. The firm as an interactor: firms as vehicles for habits and routines. ***Journal of Evolutionary Economics***, 14(3): 281–307.

Hornsby, J. S., Kuratko, D. F., Shepherd, D. A., & Bott, J. P. 2009. Managers' corporate entrepreneurial actions: Examining perception and position. ***Journal of Business Venturing***, 24(3): 236–247.

Hu, L., & Bentler, P. M. 1999. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. ***Structural Equation Modeling: A Multidisciplinary Journal***, 6(1): 1–55.

Huang, H., & Jong, S. 2018. Public funding for science and the value of corporate R&D projects; Evidence from project initiation and termination decisions in cell therapy. ***Journal of Management Studies***. https://doi.org/10.1111/joms.12423.

Hullova, D., Trott, P., & Simms, C. D. 2016. Uncovering the reciprocal complementarity between product and process innovation. ***Research Policy***, 45(5): 929–940.

Humphrey, S. E., & Aime, F. 2014. Team microdynamics: Toward an organizing approach to teamwork. ***The Academy of Management Annals***, 8(1): 443–503.

Hutchison-Krupat, J. 2018. Communication, incentives, and the execution of a strategic initiative. ***Management Science***, 64(7): 3380–3399.

Hutzschenreuter, T., & Kleindienst, I. 2006. Strategy-process research: What have we learned and what is still to be explored. ***Journal of Management***, 32(5): 673–720.

Huy, Q. N. 2002. Emotional balancing of organizational continuity and radical change: The contribution of middle managers. ***Administrative Science Quarterly***, 47(1): 31–69.

Huy, Q. N., Corley, K. G., & Kraatz, M. S. 2014. From support to mutiny: Shifting legitimacy judgments and emotional reactions impacting the implementation of radical change. ***Academy of Management Journal***, 57(6): 1650–1680.

Ilgen, D. R., Hollenbeck, J. R., Johnson, M., & Jundt, D. 2005. Teams in organizations: From input-process-output models to IMOI models. ***Annual Review of Psychology***, 56(1): 517–543.

Isern, J., & Pung, C. 2007. Driving radical change. ***McKinsey Quarterly***, (4): 24–35.

Janis, I. L. 1982. ***Groupthink: Psychological studies of policy decisions and fiascoes***. Boston: Houghton Mifflin.

Jarzabkowski, P., & Balogun, J. 2009. The practice and process of delivering integration through strategic planning. ***Journal of Management Studies***, 46(8): 1255–1288.

Jassawalla, A. R., & Sashittal, H. C. 2000. Strategies of effective new product team leaders. ***California Management Review***, 42(2): 34–51.

Jehn, K. A. 1995. A multimethod examination of the benefits and detriments of intragroup conflict. ***Administrative Science Quarterly***, 40(2): 256–282.

Jehn, K. A. 1997. A qualitative analysis of conflict types and dimensions in organizational groups. ***Administrative Science Quarterly***, 42(3): 530–557.

Jehn, K. A., & Bendersky, C. 2003. Intragroup conflict in organizations: A contingency perspective on the conflict-outcome relationship. ***Research in Organizational Behavior***, 25: 187–242.

Jehn, K. A., & Mannix, E. A. 2001. The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. ***Academy of Management Journal***, 44(2): 238–251.

Jehn, K. A., Northcraft, G. B., & Neale, M. A. 1999. Why differences make a difference: A field study of diversity, conflict and performance in workgroups. ***Administrative Science Quarterly***, 44(4): 741–763.

Jehn, K. A., Rispens, S., Jonsen, K., & Greer, L. 2013. Conflict contagion: A temporal perspective on the development of conflict within teams. ***International Journal of Conflict Management***, 24(4): 352–373.

Jehn, K. A., Rispens, S., & Thatcher, S. M. B. 2010. The effects of conflict asymmetry on work group and individual outcomes. ***Academy of Management Journal***, 53(3): 596–616.

Jensen, M. B., Johnson, B., Lorenz, E., & Lundvall, B. Å. 2007. Forms of knowledge and modes of innovation. ***Research Policy***, 36(5): 680–693.

Jordan, A. H., & Audia, P. G. 2012. Self-enhancement and learning from performance feedback. ***Academy of Management Review***, 37(2): 211–231.

Kaplan, R. S., Norton, D. P., & Sher, G. 2005. The office of strategy management. ***Harvard Business Review***, 83(10): 72–80.

Kaplan, S. 2008. Framing contests: Strategy making under uncertainty. ***Organization Science***, 19(5): 729–752.

Katzenbach, J. R., Steffen, I., & Kronley, C. 2012. Cultural change that sticks. ***Harvard Business Review***, 90(7–8): 110–117.

Katz-Navon, T. Y., & Erez, M. 2005. When collective- and self-efficacy affect team performance: The role of task interdependence. ***Small Group Research***, 36(4): 437–465.

Keil, T., McGrath, R. G., & Tukiainen, T. 2009. Gems from the ashes: Capability creation and transformation in internal corporate venturing. ***Organization Science***, 20(3): 601–620.

Keller, R. T. 2001. Cross-functional project groups in research and new product development: Diversity, communications, job stress, and outcomes. ***Academy of Management Journal***, 44(3): 547–555.

Kellermanns, F. W., & Eddleston, K. A. 2006. Corporate entrepreneurship in family firms: A family perspective. ***Entrepreneurship: Theory & Practice***, 30(6): 809–830.

Kellermanns, F. W., Floyd, S. W., Pearson, A. W., & Spencer, B. 2008. The contingent effect of constructive confrontation on the relationship between shared mental models and decision quality. ***Journal of Organizational Behavior***, 29(1): 119–137.

Kellermanns, F. W., Walter, J., Floyd, S. W., Lechner, C., & Shaw, J. C. 2011. To agree or not to agree? A meta-analytical review of strategic consensus and organizational performance. ***Journal of Business Research***, 64(2): 126–133.

Kellermanns, F. W., Walter, J., Lechner, C., & Floyd, S. W. 2005. The lack of consensus about strategic consensus: Advancing theory and research. ***Journal of Management***, 31(5): 719–737.

Kijkuit, B., & van den Ende, J. 2010. With a little help from our colleagues: A longitudinal study of social networks for innovation. ***Organization Studies***, 31(4): 451–479.

Kim, H. E., & Pennings, J. M. 2009. Innovation and strategic renewal in mature markets: A study of the tennis racket industry. ***Organization Science***, 20(2): 368–383.

Kim, W. C., & Mauborgne, R. 2003. Fair process: Managing in the knowledge economy. ***Harvard Business Review***, 81(1): 127–136.

Kim, W. C., & Mauborgne, R. 2015. Red ocean traps. ***Harvard Business Review***, 93(3): 68–73.

Kirkman, B. L., & Rosen, B. 1999. Beyond self-management: Antecedents and consequences of team empowerment. ***Academy of Management Journal***, 42(1): 58–74.

Kleingeld, A., Van Mierlo, H., & Arends, L. 2011. The effect of goal setting on group performance: A meta-analysis. ***Journal of Applied Psychology***, 96(6): 1289–1304.

Klingebiel, R., & De Meyer, A. 2013. Becoming aware of the unknown: Decision making during the implementation of a strategic initiative. ***Organization Science***, 24(1): 133–153.

Klotz, A. C., Hmieleski, K. M., Bradley, B. H., & Busenitz, L. W. 2014. New venture teams: A review of the literature and roadmap for future research. ***Journal of Management***, 40(1): 226–255.

Kogut, B., & Zander, U. 1992. Knowledge of the firm, combinative capabilities, and the replication of technology. ***Organization Science***, 3(3): 383–397.

Korsgaard, M. A., Jeong, S. S., Mahony, D. M., & Pitariu, A. H. 2008. A multilevel view of intragroup conflict. ***Journal of Management***, 34(6): 1222–1252.

Kotlar, J., De Massis, A., Wright, M., & Frattini, F. 2018. Organizational goals: Antecedents, formation processes and implications for firm behavior and performance. ***International Journal of Management Reviews***, 20: S3–S18.

Kotlar, J., & Sieger, P. 2018. Bounded rationality and bounded reliability: A study of nonfamily managers' entrepreneurial behavior in family firms. ***Entrepreneurship Theory and Practice***, 1042258718796085.

Kownatzki, M., Walter, J., Floyd, S. W., & Lechner, C. 2013. Corporate control and the speed of strategic business unit decision making. ***Academy of Management Journal***, 56(5): 1295–1324.

Kozlowski, S. W. J., & Bell, B. S. 2013. Work groups and teams in organizations: Review update. In N. W. Schmitt & S. Highhouse (Eds.), ***Handbook of psychology: Vol. 12. industrial and organizational psychology***: 412–469. Hoboken, N.J: Wiley.

Kremser, W., & Schreyögg, G. 2016. The dynamics of interrelated routines: Introducing the cluster level. ***Organization Science***, 27(3): 698–721.

Kreutzer, M., Cardinal, L. B., Walter, J., & Lechner, C. 2016. Formal and informal control as complement or substitute? The role of the task environment. ***Strategy Science***, 1(4): 235–255.

Kreutzer, M., Walter, J., & Cardinal, L. B. 2015. Organizational control as antidote to politics in the pursuit of strategic initiatives. ***Strategic Management Journal***, 36(9): 1317–1337.

Kristof-Brown, A. L., & Stevens, C. K. 2001. Goal congruence in the project teams: Does the fit between members' personal mastery and performance goals matter? ***Journal of Applied Psychology***, 86(6): 1083–1095.

Lê, J. K., & Jarzabkowski, P. A. 2015. The role of task and process conflict in strategizing. ***British Journal of Management***, 26(3): 439–462.

Lechner, C., & Floyd, S. W. 2012. Group influence activities and the performance of strategic initiatives. ***Strategic Management Journal***, 33(5): 478–495.

Lechner, C., Frankenberger, K., & Floyd, S. 2010. Task contingencies in the curvilinear relationships between intergroup networks and initiative performance. ***Academy of Management Journal***, 53(4).

Lechner, C., & Kreutzer, M. 2010a. Strategic initiatives: Past, present and future. In P. Mazzola & F. W. Kellermanns (Eds.), ***Handbook of research on strategy process***. Northampton, MA: Edward Elgar.

Lechner, C., & Kreutzer, M. 2010b. Coordinating growth initiatives in multi-unit firms. ***Long Range Planning***, 43(1): 6–32.

Lee, H., Smith, K. G., & Grimm, C. M. 2003. The effect of new product radicality and scope on the extent and speed of innovation diffusion. ***Journal of Management***, 29(5): 753–768.

Leonard-Barton, D. 1992. Core capabilities and core rigidities: A paradox in managing new product development. ***Strategic Management Journal***, 13(S1): 111–125.

LePine, J. A., Piccolo, R. F., Jackson, C. L., Mathieu, J. E., & Saul, J. R. 2008. A meta-analysis of teamwork processes: Tests of a multidimensional model and relationships with team effectiveness criteria. ***Personnel Psychology***, 61(2): 273–307.

Li, H., Bingham, J. B., & Umphress, E. E. 2007. Fairness from the top: Perceived procedural justice and collaborative problem solving in new product development. ***Organization Science***, 18(2): 200–216.

Li, J., & Hambrick, D. C. 2005. Factional groups: A new vantage on demographic faultlines, conflict, and disintegration in work teams. ***Academy of Management Journal***, 48(5): 794–813.

Li, Q., Maggitti, P. G., Smith, K. G., Tesluk, P. E., & Katila, R. 2013. Top management attention to innovation: The role of search selection and intensity in new product introductions. ***Academy of Management Journal***, 56(3): 893–916.

Locke, E. A., & Latham, G. P. 2002. Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. ***American Psychologist***, 57(9): 705–717.

Locke, E. A., & Latham, G. P. 2006. New directions in goal-setting theory. ***Current Directions in Psychological Science***, 15(5): 265–268.

Loughry, M. L., & Amason, A. C. 2014. Why won't task conflict cooperate? Deciphering stubborn results. ***International Journal of Conflict Management***, 25(4): 333–358.

Lovallo, D., & Kahneman, D. 2003. Delusions of success. How optimism undermines executives' decisions. ***Harvard Business Review***, 81(7): 56–63, 117.

Lovas, B., & Ghoshal, S. 2000. Strategy as guided evolution. ***Strategic Management Journal***, 21(9): 875–896.

Lovelace, K., Shapiro, D. L., & Weingart, L. R. 2001. Maximizing cross-functional new product teams' innovativeness and constraint adherence: A conflict communications perspective. ***Academy of Management Journal***, 44(4): 779–793.

Lubatkin, M. H., Simsek, Z., Ling, Y., & Veiga, J. F. 2006. Ambidexterity and performance in small-to medium-sized firms: The pivotal role of top management team behavioral integration. ***Journal of Management***, 32(5): 646–672.

Lumpkin, G. T., & Dess, G. G. 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. ***Academy of Management Review***, 21(1): 135–172.

Lynn, G. S. 1998. New product team learning: Developing and profiting from your knowledge capital. ***California Management Review***, 40(4): 74–93.

Lynn, G. S., Morone, J. G., & Paulson, A. S. 1996. Marketing and discontinuous innovation: the probe and learn process. ***California Management Review***, 38(3): 8–37.

Maidique, M. A., & Zirger, B. J. 1985. The new product learning cycle. ***Research Policy***, 14(6): 299–313.

Maloney, M. M., Bresman, H., Zellmer-Bruhn, M. E., & Beaver, G. R. 2016. Contextualization and context theorizing in teams research: A look back and a path forward. ***Academy of Management Annals***, 10(1): 891–942.

Mangos, P. M., & Steele-Johnson, D. 2001. The role of subjective task complexity in goal orientation, self-efficacy, and performance relations. ***Human Performance***, 14(2): 169–185.

March, J. G. 1991. Exploration and exploitation in organizational learning. ***Organization Science***, 2(1): 71–87.

March, J. G., & Simon, H. A. 1958. ***Organizations***. New York: Wiley.

Marginson, D. E. W. 2002. Management control systems and their effects on strategy formation at middle-management levels: evidence from a U.K. organization. ***Strategic Management Journal***, 23(11): 1019–1031.

Maritan, C. A. 2001. Capital investment as investing in organizational capabilities: An empirically grounded process model. ***Academy of Management Journal***, 44(3): 513–531.

Markham, S. 2000. Corporate championing and antagonism as forms of political behavior: An R&D perspective. ***Organization Science***, 11(4): 429–447.

Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. 2001. A temporally based framework and taxonomy of team processes. ***Academy of Management Review***, 26(3): 356–376.

Martin, J. A., & Eisenhardt, K. M. 2010. Rewiring: Cross-business-unit collaborations in multibusiness organizations. ***Academy of Management Journal***, 53(2): 265–301.

Mathieu, J. E., Hollenbeck, J. R., van Knippenberg, D., & Ilgen, D. R. 2017. A century of work teams in the Journal of Applied Psychology. ***Journal of Applied Psychology***, 102(3): 452–467.

Mathieu, J. E., Rapp, T. L., Maynard, M. T., & Mangos, P. M. 2009. Interactive effects of team and task shared mental models as related to air traffic controllers' collective efficacy and effectiveness. ***Human Performance***, 23(1): 22–40.

Mathieu, J., Maynard, M. T., Rapp, T., & Gilson, L. 2008. Team effectiveness 1997-2007: A review of recent advancements and a glimpse into the future. ***Journal of Management***, 34(3): 410–476.

Matta, N. F., & Ashkenas, R. N. 2003. Why good projects fail anyway. ***Harvard Business Review***, 81(9): 109–116.

Maynard, D. C., & Hakel, M. D. 1997. Effects of objective and subjective task complexity on performance. ***Human Performance***, 10(4): 303.

McGrath, R. G. 1995. Advantage from adversity: Learning from disappointment in internal corporate ventures. ***Journal of Business Venturing***, 10(2): 121–142.

McGrath, R. G. 2001. Exploratory learning, innovative capacity, and managerial oversight. ***Academy of Management Journal***, 44(1): 118–131.

McGrath, R. G., MacMillan, I. C., & Venkatraman, S. 1995. Defining and developing competence: A strategic process paradigm. ***Strategic Management Journal***, 16(4): 251–275.

McIntyre, D. P., & Srinivasan, A. 2017. Networks, platforms, and strategy: Emerging views and next steps. ***Strategic Management Journal***, 38(1): 141–160.

McKelvie, A., Haynie, J. M., & Gustavsson, V. 2011. Unpacking the uncertainty construct: Implications for entrepreneurial action. ***Journal of Business Venturing***, 26(3): 273–292.

Menz, M., & Scheef, C. 2014. Chief strategy officers: Contingency analysis of their presence in top management teams. ***Strategic Management Journal***, 35(3): 461–471.

Miles, J. R., & Kivlighan Jr., D. M. 2008. Team cognition in group interventions: The relation between coleaders' shared mental models and group climate. ***Group Dynamics: Theory, Research, and Practice***, 12(3): 191–209.

Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J. 1978. Organizational strategy, structure, and process. ***Academy of Management Review***, 3(3): 546–562.

Miles, R. H. 2010. Accelerating corporate transformations (Don't lose your nerve!). ***Harvard Business Review***, 88(1/2): 68–75.

Mintzberg, H., Ahlstrand, B. W., & Lampel, J. 2005. ***Strategy safari: A guided tour through the wilds of strategic management***. New York: Free Press.

Mintzberg, H., Raisinghani, D., & Théorêt, A. 1976. The structure of "unstructured" decision processes. ***Administrative Science Quarterly***, 21(2): 246–275.

Mintzberg, H., & Waters, J. A. 1985. Of strategies, deliberate and emergent. ***Strategic Management Journal***, 6(3): 257–272.

Mirabeau, L., & Maguire, S. 2014. From autonomous strategic behavior to emergent strategy. ***Strategic Management Journal***, 35(8): 1202–1229.

Mitchell, T. R., & James, L. R. 2001. Building better theory: Time and the specification of when things happen. ***Academy of Management Review***, 26(4): 530–547.

Mohammed, S., Ferzandi, L., & Hamilton, K. 2010. Metaphor no more: A 15-year review of the team mental model construct. ***Journal of Management***, 36(4): 876–910.

Monsen, E., Patzelt, H., & Saxton, T. 2010. Beyond simple utility: Incentive design and trade-offs for corporate employee-entrepreneurs. ***Entrepreneurship: Theory & Practice***, 34(1): 105–130.

Mooney, A. C., Holahan, P. J., & Amason, A. C. 2007. Don't take it personally: Exploring cognitive conflict as a mediator of affective conflict. ***Journal of Management Studies***, 44(5): 733–758.

Moorman, R. H., & Blakely, G. L. 1995. Individualism-collectivism as an individual difference predictor of organizational citizenship behavior. ***Journal of Organizational Behavior***, 16(2): 127–142.

Morgan, T., Obal, M., & Anokhin, S. 2018. Customer participation and new product performance: Towards the understanding of the mechanisms and key contingencies. ***Research Policy***, 47(2): 498–510.

Morris, M. H., Avila, R. A., & Alien, J. 1993. Individualism and the modern corporation: Implications for innovation and entrepreneurship. ***Journal of Management***, 19(3): 595–612.

Morris, M. H., Davis, D. L., & Allen, J. W. 1994. Fostering corporate entrepreneurship: Cross-cultural comparisons of the importance of individualism versus collectivism. ***Journal of International Business Studies***, 25(1): 65.

Mortensen, M., & Gardner, H. K. 2017. The overcommited organization: Why it's hard to share people across multiple teams - and what to do about it. ***Harvard Business Review***, 95(5): 58–65.

Murmann, J. P., Aldrich, H. E., Levinthal, D., & Winter, S. G. 2003. Evolutionary thought in management and organization theory at the beginning of the new millennium: A symposium on the state of the art and opportunities for future research. ***Journal of Management Inquiry***, 12(1): 22–40.

Nadkarni, S., & Chen, J. 2014. Bridging yesterday, today, and tomorrow: CEO temporal focus, environmental dynamism, and rate of new product introduction. ***Academy of Management Journal***, 57(6): 1810–1833.

Nag, R., Corley, K. G., & Gioia, D. A. 2007. The intersection of organizational identity, knowledge, and practice: Attempting strategic change via knowledge grafting. ***Academy of Management Journal***, 50(4): 821–847.

Nag, R., Hambrick, D. C., & Chen, M.-J. 2007. What is strategic management, really? Inductive derivation of a consensus definition of the field. ***Strategic Management Journal***, 28(9): 935–955.

Nahrgang, J. D., DeRue, D. S., Hollenbeck, J. R., Spitzmuller, M., Jundt, D. K., et al. 2013. Goal setting in teams: The impact of learning and performance goals on process and performance. ***Organizational Behavior and Human Decision Processes***, 122(1): 12–21.

Nambisan, S. 2002. Designing virtual customer environments for new product development: Toward a theory. ***Academy of Management Review***, 27(3): 392–413.

Narayanan, V. K., Colwell, K., & Douglas, F. L. 2009. Building organizational and scientific platforms in the pharmaceutical industry: A process perspective on the development of dynamic capabilities. ***British Journal of Management***, 20: S25–S40.

Nauta, A., De Dreu, C. K. W., & van der Vaart, T. 2002. Social value orientation, organizational goal concerns and interdepartmental problem-solving behavior. ***Journal of Organizational Behavior***, 23(2): 199–213.

Nauta, A., & Sanders, K. 2001. Causes and consequences of perceived goal differences between departments within manufacturing organizations. ***Journal of Occupational and Organizational Psychology***, 74(3): 321–342.

Neilson, G. L., Pasternack, B. A., & Van Nuys, K. E. 2005. The passive-aggressive organization. ***Harvard Business Review***, 83(10): 82–92.

Nelson, R. R., & Winter, S. G. 1982. ***An evolutionary theory of economic change***. Cambridge, Mass.: Belknap Press of Harvard University Press.

Noda, T., & Bower, J. L. 1996. Strategy making as iterated processes of resource allocation. ***Strategic Management Journal***, 17(S1): 159–192.

Nonaka, I. 1994. A dynamic theory of organizational knowledge creation. ***Organization Science***, 5(1): 14–37.

Northcraft, G. B., & Neale, M. A. 1987. Experts, amateurs, and real estate: An anchoring-and-adjustment perspective on property pricing decisions. ***Organizational Behavior and Human Decision Processes***, 39(1): 84–97.

Nunnally, J. C. 1978. ***Psychometric theory*** (2nd ed.). New York: McGraw-Hill.

Nyberg, A. J., Moliterno, T. P., Hale, D., & Lepak, D. P. 2014. Resource-based perspectives on unit-level human capital: A review and integration. ***Journal of Management***, 40(1): 316–346.

O'Neill, T. A., Allen, N. J., & Hastings, S. E. 2013. Examining the "pros" and "cons" of team conflict: A team-level meta-analysis of task, relationship, and process conflict. ***Human Performance***, 26(3): 236–260.

Ouchi, W. G. 1980. Markets, bureaucracies, and clans. ***Administrative Science Quarterly***, 25(1): 129–141.

Oxford Dictionary. 2016. interface - definition of interface in English | Oxford Dictionaries. ***Oxford Dictionaries | English***. https://en.oxforddictionaries.com/definition/interface.

Pappas, J. M., & Wooldridge, B. 2007. Middle managers' divergent strategic activity: An investigation of multiple measures of network centrality. ***Journal of Management Studies***, 44(3): 323–341.

Park, G., Spitzmuller, M., & DeShon, R. P. 2013. Advancing our understanding of team motivation: Integrating conceptual approaches and content areas. ***Journal of Management***, 39(5): 1339–1379.

Parker, O. N., Krause, R., & Covin, J. G. 2017. Ready, set, slow: How aspiration-relative product quality impacts the rate of new product introduction. ***Journal of Management***, 43(7): 2333–2356.

Pearsall, M. J., Ellis, A. P. J., & Bell, B. S. 2010. Building the infrastructure: The effects of role identification behaviors on team cognition development and performance. ***Journal of Applied Psychology***, 95(1): 192–200.

Pentland, B. T., & Feldman, M. S. 2005. Organizational routines as a unit of analysis. ***Industrial and Corporate Change***, 14(5): 793–815.

Peterson, R. S., & Behfar, K. J. 2003. The dynamic relationship between performance feedback, trust, and conflict in groups: A longitudinal study. ***Organizational Behavior and Human Decision Processes***, 92(1–2): 102–112.

Pettigrew, A. M. 1987. Context and action in the transformation of the firm. ***Journal of Management Studies***, 24(6): 649–670.

Pfister, J. A., Lack, S. L., & Darwin, S. N. 2017. Strategizing open innovation: How middle managers work with performance indicators. ***Scandinavian Journal of Management***, 33(3): 139–150.

Pisano, G. P. 1996. Learning-before-doing in the development of new process technology. ***Research Policy***, 25(7): 1097–1119.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. ***Journal of Applied Psychology***, 88(5): 879–903.

Pratap, S., & Saha, B. 2018. Evolving efficacy of managerial capital, contesting managerial practices, and the process of strategic renewal. ***Strategic Management Journal***, 39(3): 759–793.

Priem, R. L., & Price, K. H. 1991. Process and outcome expectations for the dialectical inquiry, devil's advocacy, and consensus techniques of strategic decision making. ***Group & Organization Management***, 16(2): 206–225.

Puranam, P., Alexy, O., & Reitzig, M. 2014. What's "new" about new forms of organizing? ***Academy of Management Review***, 39(2): 162–180.

Ramus, C. A., & Steger, U. 2000. The roles of supervisory support behaviors and environmental policy in employee "ecoinitiatives" at leading-edge european companies. ***Academy of Management Journal***, 43(4): 605–626.

Ravasi, D., & Turati, C. 2005. Exploring entrepreneurial learning: a comparative study of technology development projects. ***Journal of Business Venturing***, 20(1): 137–164.

Ren, C. R., & Guo, C. 2011. Middle managers' strategic role in the corporate entrepreneurial process: Attention-based effects. ***Journal of Management***, 37(6): 1586–1610.

Rogan, M., & Mors, M. L. 2017. Managerial networks and exploration in a professional service firm. ***Organization Studies***, 38(2): 225–249.

Roper, S., Du, J., & Love, J. H. 2008. Modelling the innovation value chain. ***Research Policy***, 37(6–7): 961–977.

Rosenbloom, R. S. 2000. Leadership, capabilities, and technological change: The transformation of NCR in the electronic era. ***Strategic Management Journal***, 21(10–11): 1083–1103.

Royer, I. 2003. Why bad projects are so hard to kill. ***Harvard Business Review***, 81(2): 48–56.

Russell, C. J., & Russell, R. D. 1992. An examination of the effects of organizational norms, organizational structure, and environmental uncertainty on entrepreneurial strategy. ***Journal of Management***, 18(4): 639.

Salvato, C. 2003. The role of micro-strategies in the engineering of firm evolution. ***Journal of Management Studies***, 40(1): 83–108.

Sandhu, S., & Kulik, C. T. 2018. Shaping and being shaped: How organizational structure and managerial discretion co-evolve in new managerial roles. ***Administrative Science Quarterly***, 0001839218778018.

Schemmann, B., Herrmann, A. M., Chappin, M. M. H., & Heimeriks, G. J. 2016. Crowdsourcing ideas: Involving ordinary users in the ideation phase of new product development. ***Research Policy***, 45(6): 1145–1154.

Schmickl, C., & Kieser, A. 2008. How much do specialists have to learn from each other when they jointly develop radical product innovations? ***Research Policy***, 37(3): 473–491.

Schulze, A., & Hoegl, M. 2006. Knowledge creation in new product development projects. ***Journal of Management***, 32(2): 210–236.

Schulze, A., & Hoegl, M. 2008. Organizational knowledge creation and the generation of new product ideas: A behavioral approach. ***Research Policy***, 37(10): 1742–1750.

Schulz-Hardt, S., Jochims, M., & Frey, D. 2002. Productive conflict in group decision making: genuine and contrived dissent as strategies to counteract biased information seeking. ***Organizational Behavior and Human Decision Processes***, 88(2): 563–586.

Schweisfurth, T. G. 2017. Comparing internal and external lead users as sources of innovation. ***Research Policy***, 46(1): 238–248.

Schwenk, C. R., & Cosier, R. A. 1993. Effects of consensus and devil's advocacy on strategic decision-making. ***Journal of Applied Social Psychology***, 23(2): 126–139.

Scott, W. R. 2008. Approaching adulthood: The maturing of institutional theory. ***Theory and Society***, 37(5): 427–442.

Shi, W., Connelly, B. L., & Cirik, K. 2018. Short seller influence on firm growth: A threat rigidity perspective. ***Academy of Management Journal***, 61(5): 1892–1919.

Shi, W. (Stone), & Prescott, J. E. 2012. Rhythm and entrainment of acquisition and alliance initiatives and firm performance: A temporal perspective. ***Organization Studies***, 33(10): 1281–1310.

Siemsen, E., Roth, A., & Oliveira, P. 2010. Common method bias in regression models with linear, quadratic, and interaction effects. ***Organizational Research Methods***, 13(3): 456–476.

Simon, H. A. 1993. Strategy and organizational evolution. ***Strategic Management Journal***, 14(S2): 131–142.

Simon, M., & Shrader, R. C. 2012. Entrepreneurial actions and optimistic overconfidence: The role of motivated reasoning in new product introductions. ***Journal of Business Venturing***, 27(3): 291–309.

Simons, R. 1991. Strategic orientation and top management attention to control systems. ***Strategic Management Journal***, 12(1): 49–62.

Simons, R. 1994. How new top managers use control systems as levers of strategic renewal. ***Strategic Management Journal***, 15(3): 169–189.

Simsek, Z., Bansal, P., Shaw, J. D., Heugens, P., & Smith, W. K. 2018. Seeing practice impact in new ways. ***Academy of Management Journal***, 61(6): 2021–2025.

Simsek, Z., Fox, B. C., & Heavey, C. 2015. "What's past is prologue": A framework, review, and future directions for organizational research on imprinting. ***Journal of Management***, 41(1): 288–317.

Simsek, Z., Heavey, C., & Fox, B. C. 2018. Interfaces of strategic leaders: A conceptual framework, review, and research agenda. ***Journal of Management***, 44(1): 280–324.

Simsek, Z., Veiga, J. F., & Lubatkin, M. H. 2007. The impact of managerial environmental perceptions on corporate entrepreneurship: Towards understanding discretionary slack's pivotal role. ***Journal of Management Studies***, 44(8): 1398–1424.

Simsek, Z., Veiga, J. F., Lubatkin, M. H., & Dino, R. N. 2005. Modeling the multilevel determinants of top management team behavioral integration. ***Academy of Management Journal***, 48(1): 69–84.

Sirkin, H. L., Keenan, P., & Jackson, A. 2005. The hard side of change management. ***Harvard Business Review***, 83(10): 108–118.

Sirmon, D. G., Hitt, M. A., Arregle, J.-L., & Campbell, J. T. 2010. The dynamic interplay of capability strengths and weaknesses: Investigating the bases of temporary competitive advantage. ***Strategic Management Journal***, 31(13): 1386–1409.

Sleesman, D. J., Conlon, D. E., McNamara, G., & Miles, J. E. 2012. Cleaning up the big muddy: A meta-analytic review of the determinants of escalation of commitment. ***Academy of Management Journal***, 55(3): 541–562.

Sleesman, D. J., Lennard, A. C., McNamara, G., & Conlon, D. E. 2018. Putting escalation of commitment in context: A multilevel review and analysis. ***Academy of Management Annals***, 12(1): 178–207.

Smith, K. G., Collins, C. J., & Clark, K. D. 2005. Existing knowledge, knowledge creation capability, and the rate of new product introduction in high-technology firms. ***Academy of Management Journal***, 48(2): 346–357.

Srikanth, K., Harvey, S., & Peterson, R. 2016. A dynamic perspective on diverse teams: Moving from the dual-process model to a dynamic coordination-based model of diverse team performance. ***Academy of Management Annals***, 10(1): 453–493.

St. John, C. H., & Rue, L. W. 1991. Co-ordinating mechanisms, consensus between marketing and manufacturing groups, and marketplace performance. ***Strategic Management Journal***, 12(7): 549–555.

Staw, B. M. 1981. The escalation of commitment to a course of action. ***Academy of Management Review***, 6(4): 577–587.

Stevenson, W. B., Pearce, J. L., & Porter, L. W. 1985. The concept of "coalition" in organization theory and research. ***Academy of Management Review***, 10(2): 256–268.

Strang, D., & Jung, D.-I. 2009. Participatory improvement at a global bank: The diffusion of quality teams and the demise of a six sigma initiative. ***Organization Studies***, 30(1): 31–53.

Strebel, P. 1996. Why Do Employees Resist Change? ***Harvard Business Review***, 74(3): 86–92.

Suarez, F., & Lanzolla, G. 2005. The half-truth of first-mover advantage. ***Harvard Business Review***, 83(4): 121–127.

Subramaniam, M., & Venkatraman, N. 2001. Determinants of transnational new product development capability: testing the influence of transferring and deploying tacit overseas knowledge. ***Strategic Management Journal***, 22(4): 359–378.

Sykes, H. B. 1986. Lessons from a new ventures program. ***Harvard Business Review***, 64(3): 69–74.

Takeuchi, H., & Nonaka, I. 1986. The new new product development game. ***Harvard Business Review***, 64(1): 137–146.

Tarakci, M., Ateş, N. Y., Floyd, S. W., Ahn, Y., & Wooldridge, B. 2018. Performance feedback and middle managers' divergent strategic behavior: The roles of social comparisons and organizational identification. ***Strategic Management Journal***, 39(4): 1139–1162.

Tasheva, S., & Hillman, A. 2018. Integrating diversity at different levels: multi-level human capital, social capital, and demographic diversity and their implications for team effectiveness. ***Academy of Management Review***, amr.2015.0396.

Taylor, A. 2010. The next generation: Technology adoption and integration through internal competition in new product development. ***Organization Science***, 21(1): 23–41.

Teece, D. J., Pisano, G., & Shuen, A. 1997. Dynamic capabilities and strategic management. ***Strategic Management Journal***, 18(7): 509–533.

Tekleab, A. G., Karaca, A., Quigley, N. R., & Tsang, E. W. K. 2016. Re-examining the functional diversity–performance relationship: The roles of behavioral integration, team cohesion, and team learning. ***Journal of Business Research***, 69(9): 3500–3507.

Tekleab, A. G., Quigley, N. R., & Tesluk, P. E. 2009. A longitudinal study of team conflict, conflict management, cohesion, and team effectiveness. ***Group & Organization Management***, 34(2): 170–205.

Thiel, C. E., Harvey, J., Courtright, S., & Bradley, B. 2017. What doesn't kill you makes you stronger: How teams rebound from early-stage relationship conflict. ***Journal of Management***, 0149206317729026.

Thomas III, L. G., & Waring, G. 1999. Competing capitalisms: Capital investment in American, German, and Japanese firms. ***Strategic Management Journal***, 20(8): 729–748.

Thomas, L., & Ambrosini, V. 2015. Materializing strategy: The role of comprehensiveness and management controls in strategy formation in volatile environments. ***British Journal of Management***, 26: S105–S124.

Thomke, S. H. 1997. The role of flexibility in the development of new products: An empirical study. ***Research Policy***, 26(1): 105–119.

Thrane, S., Blaabjerg, S., & Møller, R. H. 2010. Innovative path dependence: Making sense of product and service innovation in path dependent innovation processes. ***Research Policy***, 39(7): 932–944.

Triandis, H. C. 2001. Individualism-collectivism and personality. ***Journal of Personality***, 69(6): 907–924.

Tushman, M. L., Smith, W. K., & Binns, A. 2011. The Ambidextrous CEO. ***Harvard Business Review***, 89(6): 74–80.

Vaara, E., & Whittington, R. 2012. Strategy as Practice: Taking social practices seriously. ***Academy of Management Annals***, 6(1): 285–336.

Van Ees, H., Gabrielsson, J., & Huse, M. 2009. Toward a behavioral theory of boards and corporate governance. ***Corporate Governance: An International Review***, 17(3): 307–319.

van Oorschot, K. E., Akkermans, H., Sengupta, K., & Wassenhove, L. N. V. 2013. Anatomy of a decision trap in complex new product development projects. ***Academy of Management Journal***, 56(1): 285–307.

Vancouver, J. B., & Schmitt, N. W. 1991. An exploratory examination of person-organization fit: Organizational goal congruence. ***Personnel Psychology***, 44(2): 333–352.

Vashdi, D. R., Bamberger, P. A., & Erez, M. 2013. Can surgical teams ever learn? The role of coordination, complexity, and transitivity in action team learning. ***Academy of Management Journal***, 56(4): 945–971.

Voyer, J. J. 1994. Coercive organizational politics and organizational outcomes: An interpretive study. ***Organization Science***, 5(1): 72–85.

Waller, M. J., Okhuysen, G. A., & Saghafian, M. 2016. Conceptualizing emergent states: A strategy to advance the study of group dynamics. ***Academy of Management Annals***, 10(1): 561–598.

Walter, J., Lechner, C., & Kellermanns, F. W. 2016. Learning activities, exploration, and the performance of strategic initiatives. ***Journal of Management***, 42(3): 769–802.

Weber, K., & Waeger, D. 2017. Organizations as polities: An open systems perspective. ***Academy of Management Annals***, 11(2): 886–918.

Weiss, J., & Hughes, J. 2005. Want collaboration? ***Harvard Business Review***, 83(3): 93–101.

Wernerfelt, B. 1984. A resource-based view of the firm. ***Strategic Management Journal***, 5(2): 171–180.

West, G. P. 2007. Collective cognition: When entrepreneurial teams, not individuals, make decisions. ***Entrepreneurship Theory and Practice***, 31(1): 77–102.

Wiedner, R., Barrett, M., & Oborn, E. 2017. The emergence of change in unexpected places: Resourcing across organizational practices in strategic change. ***Academy of Management Journal***, 60(3): 823–854.

Wilden, R., Devinney, T. M., & Dowling, G. R. 2016. The architecture of dynamic capability research identifying the building blocks of a configurational approach. ***The Academy of Management Annals***, 10(1): 997–1076.

Williamson, O. E. 1981. The economics of organization: The transaction cost approach. ***American Journal of Sociology***, 87(3): 548–577.

Winter, S. G. 2003. Understanding dynamic capabilities. ***Strategic Management Journal***, 24(10): 991–995.

Winter, S. G. 2013. Habit, deliberation, and action: Strengthening the microfoundations of routines and capabilities. ***The Academy of Management Perspectives***, 27(2): 120–137.

Witte, E. 1972. Field research on complex decision making processes - The phase theorem. (N. Joost & A. L. Thimm, Trans.)***International Studies of Management & Organization***, 2(2): 156–182.

Woehr, D. J., Loignon, A. C., Schmidt, P. B., Loughry, M. L., & Ohland, M. W. 2015. Justifying aggregation with consensus-based constructs: A review and examination of cutoff values for common aggregation indices. ***Organizational Research Methods***, 18(4): 704–737.

Wolf, C., & Floyd, S. W. 2017. Strategic planning research toward a theory-driven agenda. ***Journal of Management***, 43(6): 1754–1788.

Wolpert, J. D. 2002. Breaking out of the innovation box. ***Harvard Business Review***, 80(8): 76–83, 148.

Wood, R. E. 1986. Task complexity: Definition of the construct. ***Organizational Behavior and Human Decision Processes***, 37(1): 60–82.

Xie, J., Song, X. M., & Stringfellow, A. 1998. Interfunctional conflict, conflict resolution styles, and new product success: A four-culture comparison. ***Management Science***, 44(12): S192–S206.

Yan, T., & Dooley, K. J. 2013. Communication intensity, goal congruence, and uncertainty in buyer–supplier new product development. ***Journal of Operations Management***, 31(7–8): 523–542.

Ybema, S., & Horvers, M. 2017. Resistance through compliance: The strategic and subversive potential of frontstage and backstage resistance. ***Organization Studies***, 38(9): 1233–1251.

Zahra, S. A. 1991. Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. ***Journal of Business Venturing***, 6(4): 259–285.

Zahra, S. A. 1996. Technology strategy and financial performance: Examining the moderating role of the firm's competitive environment. ***Journal of Business Venturing***, 11(3): 189–219.

Zahra, S. A., Filatotchev, I., & Wright, M. 2009. How do threshold firms sustain corporate entrepreneurship? The role of boards and absorptive capacity. ***Journal of Business Venturing***, 24(3): 248–260.

Zahra, S. A., Neubaum, D. O., & Huse, M. 2000. Entrepreneurship in medium-size companies: Exploring the effects of ownership and governance systems. ***Journal of Management***, 26(5): 947–976.

Zahra, S. A., Nielsen, A. P., & Bogner, W. C. 1999. Corporate entrepreneurship, knowledge, and competence development. ***Entrepreneurship: Theory & Practice***, 23(3): 169–189.

Zander, U., & Kogut, B. 1995. Knowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test. ***Organization Science***, 6(1): 76–92.

Zappos. 2016. Holacracy - Flattening the Organization Structure and Busting Bureaucracy. ***Zappos Insights***. http://www.zapposinsights.com/about/holacracy.

Zhao, Z. J., & Anand, J. 2013. Beyond boundary spanners: The 'collective bridge' as an efficient interunit structure for transferring collective knowledge. ***Strategic Management Journal***, 34(13): 1513–1530.

Zimmermann, A., Raisch, S., & Cardinal, L. B. 2018. Managing persistent tensions on the frontline: A configurational perspective on ambidexterity. ***Journal of Management Studies***, 55(5): 739–769.

Zott, C., Amit, R., & Massa, L. 2011. The business model: Recent developments and future research. ***Journal of Management***, 37(4): 1019–1042.