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Adding Complexity to Theories of Paradox, Tension and Duality of Innovation and Change:

Introduction to
Organization Studies Special Issue on
Paradox, Tensions and Dualities of Innovation and Change

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Approaches to paradox and tensions have deep historical roots. Eastern philosophers such as Lao Tzu and Confucius described the world as a mystical interplay of contradictions (Chen, 2002; Li, 2014). The Tao te Ching, for example, opens with the puzzling and circular first line, “The Tao that can be told is not the eternal Tao”. Western scholars such as Aristotle or Hegel depicted paradox as irrational and unsolvable puzzles or double binds. The classic example is the liar’s paradox, with the statement “I am lying” leading one in strange loops between honesty and falsehood. Both these traditions stress that our greatest insights derive from grappling with intricate, interwoven and often irrational contradictions.

Theories of paradox and tensions also offer much promise for current and future leaders, with the potential to help inform our messy, apparently unexplainable, and often seemingly irrational contemporary world – limited resources, accelerating change, and growing plurality surface mounting and dynamic contradictions in everyday decisions and activities in organizations and society (Smith & Lewis, 2011). The potential of such theories may be especially strong in the context of ‘grand’ challenges. Indeed, there has perhaps never before been a greater urgency for leaders to understand the range of tensions experienced, and to learn how to respond in different, more complex and integrative ways.

Our motivation for this special issue was to shine new light on the challenges and opportunities posed by increasing complexity in the practice and context of organizing.

Specifically, we encouraged papers that examine the nature, dynamics, processes, cycles, and management of such tensions. The notion that innovation and change involve an intricate set of tensions, competing demands, conflicts, contradictions, and dilemmas is well established in the organizational literature (Bledow, Frese, Anderson, Erez, & Farr, 2009). For example, there has been much written about the tensions evident in the twin processes of creating ideas and implementing them (Lavie, Stettner, & Tushman, 2010; March, 1991; Tushman & O'Reilly, 1996), and scholars have shown that creative ideas are expected to meet simultaneously the need for both novelty and usefulness (Amabile, 1996; Miron-Spektor & Erez, 2017; Torrance, 1974). There is also a significant body of work on tensions surrounding technological innovation (Jarvenpaa & Wernick, 2011), which features long-standing calls for more integrative approaches to a range organizational and inter-organizational tensions (von Hippel, 1987).

At the heart of this and related work in organization theory is the idea that oppositional demands represent core features of organizational life (Barnard, 1938; Fayol, 1990; Taylor, 1911; Thompson, 1967). Yet there remains a tendency in parts of the management literature to impose rationality and order on complex organizational puzzles, and treat tensions as either/or tradeoffs. Some of the trade-off logic dates back to contingency approaches; prescribing choices between competing demands *contingent upon* environmental factors (Lawrence & Lorsch, 1967; Woodward, 1965). Such an approach addresses tensions through the question “under what conditions would I choose A or B?” In the 1980s and 1990s, prevailing theories acknowledged tensions in the nature of innovation (e.g., ambidexterity, punctuated equilibrium). Classic models of organizational change delineate times for exploiting existing capabilities through incremental changes punctuated by moments for exploring radical changes (Tushman & Romanelli, 1985). Applying these lenses, tensions are seen as incompatible and mutually exclusive – promoting a

tradeoff, sequencing, or separation of opposing demands. For example, competition and collaboration might be portrayed as a tradeoff: firms collaborate to reduce competition they face in industries with high levels of technological intensity (Ang, 2008).

Yet the 21st Century brought with it unprecedented complexity, diversity and pace to our modern world – globalization, the diffusion of information technology and changing consumption patterns forced organizations to grapple with new or evolving tensions. Such rising pressures, in turn, saw organizations search for new ‘solutions’, which often surfaced further tensions. For example, one response to this increasing complexity was for organizations to make their boundaries more porous; to share ideas and practices across organizations. Yet while interorganizational collaboration may reduce competition in the short-term, it can also serve to create fiercer rivals in the long-term (Ingram & Yue, 2008). Concurrently, there was an urgency to address complex and deep-rooted challenges – so-called “wicked problems” (Rittel & Webber, 1973) – such as those related to climate change, poverty, alienation, and cybercrime (Ferraro, Etzion, & Gehman, 2015), but also a realization that only limited progress had been made – if anything, the scale of these problems appeared to be becoming greater.

These developments precipitated a growing interest in foundational contributions to management research from the late 1970s and early 1980s that resurfaced paradox and dialectics not as trade-offs, but as interacting threads that perpetually define and inform one another over time (Benson, 1977; Poole & Van de Ven, 1989; Putnam, 1986; Quinn & Cameron, 1988a; Schneider, 1971; Smith & Berg, 1987). In their 1988 compendium, “Paradox and Transformation: Toward a Theory of Change in Organization and Management,” Cameron and Quinn (1988b) assembled articles grappling with paradoxes of change and noted interdependencies of dual demands alongside their oppositions. For example, Poole and Van de

Ven (1989; 1988) called for a dialectical transcendence of competing demands to enable change; a “both/and” rather than an “either/or” approach.

These early works planted the seeds for exploring co-existing opposites. At the same time, there was also a search for new theories that more could more effectively deal with greater uncertainty, irrationality and absurdity. Building off these ideas, a wave of research in the 2000s emerged that recognized in a more formal way the interdependence of contradictions in innovation and change. Duality scholars depict such oppositional elements as conceptually distinct and contradictory yet “also mutually enabling” (Farjoun, 2010: 2002). The duality approach increases our understanding of the underlying elements, mechanisms, and dynamics of co-existing contradictory elements in change and stability. Duality also often encourages a broader conceptualization of opposing elements. Among other things, duality helps to uncover new combinations of tensions and responses, as it uncouples mechanisms and outcomes that are either overlooked or have become synonymous in the existing literature. Diversity offers an example. Heterogeneity often implies innovation and change but diversity also confirms stability (Farjoun, 2010). Diverse teams open a larger pool of knowledge than homogeneous teams, which may enhance creative solutions, but diversity can also hinder innovation because of categorization of the ingroup by the outgroup and lack of shared understanding (Dahlin, Weingart, & Hinds, 2005).

The core idea that tensions embed competing demands that are contradictory yet interdependent is now broadly accepted in the innovation and change literature. For example, scholars highlight interdependencies inherent across the dualities of novelty and usefulness of creativity (Bledow, et al., 2009; Miron-Spektor & Erez, 2017), and through organizational processes of managing exploration and exploitation (Andriopoulos & Lewis, 2009; Raisch &

Zimmerman, 2017; Smith, 2014; Tushman & O'Reilly, 1996). Studies further emphasize how unbridled creativity and innovation flourish under selective constraints, rather than unfettered freedom (Klein, Ziegert, Knight, & Xiao, 2006; Rosso, 2014). Indeed, interdependent contradictions are further evident in a wide range of organizational research. For example, Gebert, Boerner and Kearney (2010) suggested that simultaneously enacting opposing action strategies can yield synergies that foster innovation. Social entrepreneurship research has highlighted tensions of managing innovative organizations that simultaneously achieve both profits and social missions (DiDomenico, Tracey, & Haugh, 2009). Garud, Gehman and Kumaraswamy (2011) showed that the ability to embrace multiple orientations at the same time was a core feature of effective innovation, and Lisak, Erez, Sui and Lee (2016) identified ways to overcome barriers to innovation in culturally diverse teams. Mazmanian, Orlikowski, and Yates (2013) unpacked fluid and conflicting demands of knowledge professionals leveraging mobile devices in the workplace. In the context of online knowledge production, Faraj, Jarvenpaa, and Majchrzak (2011) argued for a broader range and dynamic view of contradictory elements constituting tensions. Such elements include passion and technology affordances that interact to balance, rebalance, and provide feedback for different actions and their consequences. Beyond innovation, a duality view has considered paradoxes with respect to culture (Johnston & Selsky, 2005), institutions (Wijen & Ansari, 2007), discourse (Hatch & Ehrlich, 1993; Jarzabkowski & Sillince, 2007), and authority structures (Diefenbach & Sillince, 2011).

It seems clear, then, that research on tensions has made significant headway, spawning a new wave of organizational scholarship focused on many different types of contradictions in many different types of organizations and settings. But while the interdependencies of opposing elements have been recognized in this work, much of the nuance and complexity that

characterize these interdependencies remain unexamined or under-theorized. To illustrate, in his seminal article, Farjoun (2010) proposed that duality “retains the idea of two essential elements but it views them as interdependent rather than separate and opposed... These two elements while conceptually distinct, are mutually enabling and a constituent of one another” (2010: 203). A similar approach is proposed by Gerbert et al. (2010: 602), who argued that “openness to different views decreases tendencies toward dogmatism... Analogously, common standards of evaluation help the team members become focused and aligned.” Interestingly, however, Gerbert et al. (2010) suggested testing for the interaction effect of the two elements in search of their joint effect. The assumption is that the interaction effect has some existence and meaning that stands independent of the two elements that interact. This is different from the view of Farjoun (2010) that presented the elements of duality as constituent of one another.

Smith and Lewis (2011) present a third view, which centers on the concept of dynamic equilibrium, suggesting that competing demands exist in ongoing interactions that morph over time. Their model raised questions of the level and nature of interdependence, noting how paradoxical tensions constantly impact one another as they are interwoven across types of tensions and nested across levels of analysis. These authors wrote that the interactions represent "purposeful and cyclical responses to paradox over time [that] enable sustainability" (2011: 382).

The complex interactions of paradoxical elements excited and motivated us as we prepared the call for papers for this special issue. The call also celebrated diversity by assembling an eclectic group of editors with different – but complementary – interests and expertise. Specifically, the special issue call encouraged the submission of papers that considered multiple levels of analyses. Multi-level approaches, we suggest, are particularly illuminating for exploring commonalities and differences in paradoxes and tensions because elements that are

considered to be in a competing relationship at a micro-level of analysis may become complementary at a more macro level, or vice versa. For example, at the individual level different cognitive styles – such as the ability to be creative and pay attention to detail – may appear in conflict because the same person may not have the same level of strength in both (Miron, Erez, & Naveh, 2004), but such conflict may not be evident at the level of the team because teams are able to leverage the diversity of their members to compensate for individual limitations (Miron-Spektor, Erez, & Naveh, 2011). In inviting authors to examine multiple levels of analysis, we also hoped for the unexpected connections between apparently contradictory elements to be revealed, and for important parallels in the mechanisms, contexts and motives underlying dualities to emerge. For example, simultaneously high levels of competition and collaboration in a team can introduce a positive *challenge* that encourages members to increase their motivation to expend energy and effort in idea generation (Baer et al., 2010). A similar positive force has been identified in an open source collective (which operates beyond the firm level) where proprietary and public interests often clash (O'Mahony & Bechky, 2008).

An Overview of the Special Issue

In our call for papers, we sought scholarship that would push the boundaries of existing knowledge about tensions in innovation and change. In response, we received over 100 initial submissions, addressing a wide range of phenomena and levels, accentuating the broad applicability of paradox and dialectical lenses. The nine papers in this special issue demonstrate such theoretical versatility and breadth, stressing the value of paradox, tensions, and duality in studies of innovation and change. These papers draw from an array of methodologies and explore insights across varied innovation and change phenomena, industries and geographies.

While seven of the studies adopt an inductive and qualitative methodology, one study apply an individual-level experimental research design, while another offers a theoretical argument. The studies explore tensions in phenomena such as senior leadership decision making, cross-sector collaborations, inter-professional collaborations, employee identification, and mergers and acquisitions. Moreover, they explore these issues in industries ranging from utilities, media and public services to health care and print. They further use data from China, India, Australia, the UK, and the US. Such variety offers great promise for advancing our understanding of paradoxes, tensions, and duality in innovation and change. We arranged [SW1]these articles below by their primary level of analysis. We start with a theoretical paper exploring varied approaches to interdependent contradictions. We then turn to papers on cross-sector collaboration, organizational phenomena, interpersonal interactions and individual level approaches.

< Insert Table About Here >

In this special issue, **Hargrave and Van de Ven** dissect varied approaches to tensions, comparing core features that differentiate dialectical and paradox scholarship. Their work highlights distinguishing factors such as power, agency and outcomes. Whereas paradox theory implies that power informs virtuous and vicious cycles, empirical studies largely avoid these dynamics and implicitly impose expectations of equal power in relational constraints. In contrast, dialectical traditions stress power as a core, constitutive feature through which tensions emerge, morph and change. Paradox studies depict the persistence of underlying tensions; competing demands cannot be resolved but rather continually resurface. Scholars explore how actors cope with these persistent tensions. Such studies differentiate between strategies that lead to positive virtuous cycles and those that reinforce negative, vicious cycles. In contrast, studies of dialectics

often assume that each side of a tension resides within distinct individuals or groups. Conflict arises as each side defends its own needs, surfacing more adversarial relationships. Their insights provoke a number of critical questions for future reflection. Are paradoxes and dialectics different types of tensions? Alternatively, are dialectics and paradoxes different lenses on the same tension? As illustration, they describe a tension between the desire for autonomy on the part of local television stations and a desire by control from the overall network. Viewed through the instantiation of a specific conflict, these two positions surfaced a dialectical tension in which a new solution resulted in more directive and informed local autonomy. Yet such tensions proved paradoxical when recognizing that the contradictory and interdependent relationship between autonomy and control persists over time. A dialectical tension may be the momentary instantiation of a deeper and longer term paradox.

Sharma and Bansal investigate tensions between social mission and financial motives in cross-sector partnerships of commercial businesses and non-profit NGOs. Their comparison of five collaboratives in India surface the value of *categorical fluidity*, ongoing change and dynamism to effectively address paradoxical tension. Collaboratives that adopted a fluid approach to categories also engaged in more contextual, iterative problem solving generative of more creative, novel, and effective outcomes. This study advances our understanding of innovation and change within the relationships between opposing poles, and the impact of our approaches to engaging such continual interplay. As a result, Sharma and Bansal challenge future scholars to not only understand change and innovation that results from clashes between poles, but also that emerges within each distinct pole.

Calabretta, Gemser and Wijnberg explore the tension between rationality and intuition in strategic decision making. To do so the authors draw on seven case studies of innovation

projects in design firms. The authors build a three-phase model that theorizes how organizations can manage this tension and promote “paradoxical thinking”. First, organizations need to prepare the ground for paradoxical thinking by addressing fears and encouraging actors to experiment with both intuitive and rational frames. Second, organizations strive to convey concrete practices for combining intuitive and rational modes of thought. Finally, organizations embed – or imprint – paradoxical thinking into their culture. Interestingly, the study explores cognitive and emotional components of paradox, shedding light on their relationship and interplay.

In a comparative case study of four media subunits, **Knight and Paroutis** ask what factors create the conditions for paradoxical tensions to become salient to senior leaders. As they grappled with innovation and change from new internet technologies, leaders of some subunits experienced clashing tensions between their new, exploratory products and their existing, exploitative ones, while others noted not only these contradictions but also their interdependencies. The differences, Knight and Paroutis argue, emerges from practices of the top management team to shift their teams’ interpretive context, making salient the relationship between poles instrumentally, rationally, and temporally. Their study explores critical questions about how senior leaders can communicate and engage subordinates to appreciate the complexity of paradoxes and dualities.

Jarzabkowski and Le reveal the interdependencies of surfacing and responding to tensions through a practice-based study of a major strategic change. Their work focuses on humor in interactional dynamics. The article highlights how the construction and responses to tensions are intertwined through different paths. Responses highlight the role of micro-practices and their sequential interdependencies, and how humor plays a role in shaping interdependencies and subsequent organizational action. Such action can take place across different levels of

analysis. The study advances insights into how humor is used to socially construct the absurdity of issues, facilitating the acceptance of tensions and helping move an organization through change.

Sheep, Fairhurst, and Khazanchi complicate our understanding of innovation and change through an inductive case study of a reacquired spinoff turned subsidiary. Because of the parent company's difficult financial situation, the spinoff faced multiple, linked tensions that either amplified or attenuated their combined effects for innovative inaction. The article presents the concept of *tensional knots*, moving beyond single tension management to examine a more complicated, compounded face as existing tensions give way to new ones. Knots can lead to wild, unbalanced pushes and pulls both within and across tensions. Rather than examining the tensions or their elements as co-existing, the study positions tensions weaving together via their interdependencies and combined consequences for inaction. Hence, the paper is important in shedding light on tensions in vicious cycles during major organizational change. The discourse lens reveals empirically the absurdity of rationalization in such cycles.

Cuganesan further explores the role of power as police officers grappled with identity tensions in response to a change in organizational structure. Seeking to more effectively address critical crimes and more efficiently engage police officers, the organization disbanded units of specialists that were distinct from one another, and encouraged all officers to be generalists. Police officers with higher status identity rebelled, wanting to maintain their differentiated identity, whereas lower status officers embraced the greater similarity. These ongoing tensions demanded that organizational leaders adopt varied, ongoing responses to effectively implement change. In this study, Cuganesan reminds us that identity tensions critically inform change efforts, particularly tensions around optimal distinctiveness. By examining different groups

within the organization, the study further recognizes varied reactions to tensions between differences and similarities.

Interprofessional collaborations are rife with tensions, which often provoke well-intended interactions to spark detrimental outcomes. **Hug, Reay and Chreim** noticed that the management of such tensions shifted significantly over time in an interprofessional collaboration between medical experts (doctors and nurses) and psycho-social-behavioral experts (social workers, psychologists and counselors). Initial power dynamics favored medical experts, creating ongoing and detrimental tensions. Over time, the collaborative adopted practices to equalize power, leading to more productive interactions, more creative solutions and better outcomes for patients. This study explicates how power dynamics critically impact tensions, and notes managerial practices that inform and shift these power dynamics.

Keller, Loewenstein and Yan apply experimental methods to examine the influence of culture and conditions on how individuals frame paradoxical tensions. Their empirical studies challenge the assumption that understandings of paradox are universal. Drawing from lay categorization theory, they argue that a key factor lies in how individuals in different cultures code categories. Specifically, they propose that Chinese culture leads individuals to adopt categorical codes that could be both competitive and cooperative, whereas Western culture drives individuals to allocate behaviors to a singular categorical code. Integrating insights from cross-cultural psychology, their studies extend a socially-constructed model of paradox, questioning the subjectivity of categorization and contradiction, and ultimately our understanding of paradox. Their work invites future research on the potential for individual growth and development. If cultural contexts inform our paradoxical mindsets, how can these mindsets grow and shift over time?

Adding Complexity to Theories of Paradox, Tensions, and Duality

While divergent in their empirical approaches and contexts, each paper offers critical insights to expand our collective understanding of paradox, tensions, and duality. A scholarship of paradox and dialectics raises core tensions – between simplicity and complexity, rationality and irrationality, circularity and linearity. Interdependent contradictions pose a complex, irrational and circular phenomena of study. Yet we have tended to flatten related concepts – make them simple, rational and linear – in order to study these phenomena. Now is our opportunity to take a core set of ideas and expand upon them, accentuating greater complexity and absurdity. Below, we highlight some of these critical developments:

- 1) **Divergence and convergence of varied traditions** – Insights about paradox, dialectics and dualities push organizational theory beyond either/or contingency approaches to value the intricate interdependencies between tensions. Yet while their similarities stress valued contrasts to traditional theories, their distinctions highlight nuanced subtleties that extend our theorizing, particularly in the context of innovation and change. **Hargrave and Van de Ven** highlight differences in how these theories approach innovation and change, noting varied approaches to power, sensemaking/agency, and outcomes. Building on these themes, several studies in this issue introduce and grapple with power. **Huq, Reay, and Chriem** address the issue of power in paradox. Consistent with Hargrave and Van de Ven's assessment, they found that the unequal distribution of power led to transformative outcomes, where one pole overtook the other. Aware of wanting to sustain competing demands simultaneously, leaders shifted practices to enable more equal power, allowing opposing groups to engage alternative perspectives. **Cuganesan's** study

of the police force also highlighted how variations in power dynamics inform change.

Change challenged high status individuals, who rejected the change and sought to maintain their distinctive status. However, change enabled greater opportunities for lower status individuals, who sought a greater balance between similarities and distinctiveness.

2) **Surfacing paradox** – Studies of paradox and dialectics explore how interdependent contradictions surface at distinct moments over time. Yet many empirical studies examine a period when actors grapple with and address existing tensions, with less insight into factors that surface tensions. Studies in this special issue expand our thinking about how paradoxes and dialectics become salient to actors. **Jarzbakowski and Le** extend insights about the surfacing role of discourse and interpersonal dynamics. They point to a specific type of discourse – humor. Through detailed coding of meeting transactions in a telecommunications company, they note how people’s jokes often raised deep tensions between the company’s market demands and regulatory requirements. Moreover, these jokes allowed actors to grapple with ongoing tensions. **Knight and Sotioros** further discussion of specific practices to address paradox, but do so in the context of senior leaders. They find that leaders play an important role in rendering tensions salient. They compare four strategic business units introducing innovation, and note that while the tensions between exploration and exploitation existed for all of these units, senior leaders fostered an interpretive context that either accentuated or masked the interdependent nature of these contradictory agendas. Together these studies challenge us to further investigate how and why tensions emerge.

3) **Nested and Interwoven Tensions** – Scholars have described paradoxes as nested across levels of analysis and interwoven across types of tensions. One set of tensions can

inform, challenge, and create another set of tensions. However, empirical studies often focus on one core tension at one level of analysis in order to simplify analyses and interpretation. Studies in this special issue complicate these insights. Notably, **Sheep, Fairhurst, and Khazanchi** explore the interwoven nature of tensions, demonstrating how tensions are ‘knotted’ together. Their study challenges scholars to explore the interwoven nature of paradoxes and dualities and investigate the processual dynamics of how one set of tensions provokes another. **Keller, Lowenstein and Yan** further stress multi-level dynamics. Their experimental research highlights how cognitive frames imposed by national culture inform our individual cognition when facing tensions.

- 4) **Dynamic Poles** – Scholars often assume that the poles of paradox remain stable; and that their dynamics depend on how individuals experience the poles and/or the relationship between the poles. **Sharma and Bansal** posit that effectively managing conflicting demands between social missions and commercial outcomes depends on flexibility in how individuals understand each of the poles and the extent to which they take the perspective of the other side. Their study provokes questions about what is malleable and what is fixed, and whether paradox is a state of mind rather than an objective reality.
- 5) **Cross-cultural differences** – Studies suggest that “paradox” itself is a construct, and our understanding of paradox depends on how we understand categories, boundaries, and dynamism. In particular, cross-cultural psychologists have pointed to national cultures as a source of alternative paradigms for approaching competing demands. Broadly speaking, these studies suggest that Western traditions, emerging from the logical and rational approaches of Greek philosophers, tend to adopt a more linear approach to tensions that stresses distinctions without integration. In contrast, Eastern traditions, emerging from

the cyclical and mystical traditions of Buddhism, Confucianism and Taoism emphasize unity, harmony and interdependence, but often at the expense of distinctive contradictions (Nisbett, 2010; Peng & Nisbett, 1999; Li, 2014). **Keller, Lowenstein and Yan** challenge us to unpack these differences, noting how national culture informs our categorization processes, and therefore our approach to tensions such as cooperation and competition. This work motivates future research that questions how national culture and diverse cultural approaches might nuance our findings about paradoxes, tensions and dualities.

- 6) **Emotion, cognition and paradox** – The study of emotion has received renewed attention in organization theory, encouraging research into the role of emotions in how individuals experience and respond to tensions (Toubiana & Zietsma, 2016). Interestingly, while there is some important work on emotion from a paradox perspective (Vince & Broussine, 1996), paradox scholars have tended to emphasize the cognitive rather than the affective components of paradox. By contrast, **Calbretta, Gemser and Wijnberg** explicitly examine the relationship between cognition and emotion in the experience and management of paradox. To do so they draw on a qualitative study of seven innovation projects, with a particular focus on the intuition-rationality tension in decision making. The core of their argument is that the development of paradoxical frames allows decision makers to engage productively with tension and overcome the deep sense of discomfort often associated with it. Crucially, the authors find that the practice of “emotional equanimity” – encouraging team members to disconnect from their work routines to achieve a state of composure – helps predominantly rational decision makers become more open to the use of intuition in problem solving. Promoting “a lasting state of

emotional calm and confidence” may reduce anxiety and allow decision makers to embrace rather than resist paradoxical thinking.

7) **Qualitative over Quantitative Empirical Analyses** – In our editorial criteria, we placed greater weight on the empirical, as opposed to purely theoretical and conceptual papers, in order to surface and investigate interdependencies. Our editorial team was well equipped to handle quantitative papers as well as qualitative papers. However, resulting papers (in the final issue as well as the broader pool of submissions) signal a continued emphasis on qualitative approaches in this field. We could hypothesize reasons for this leaning. For instance, perhaps tensions, dualities and paradoxes remain a relatively nascent field of study, so it is unsurprising that much work is inductive and exploratory, using methods that allow for a richer understanding of context. Alternatively, it might be that scholars favoring interpretive lenses and corresponding methods tend to seek out tensions and cyclical dynamics. And/or it may be that quantitative methods tend to over-rationalize/polarize constructs in the process of operationalizing and analyzing them. We might then encourage more sophisticated (and ‘messy’, circular, etc.) quantitative measures and analyses, and note related challenges. Perhaps all of the above explanations, and others, might have played a role in the predominance of qualitative papers in the special issue. Yet in the spirit of ‘full cycle research’, we believe that the extant balance challenges future scholarship to develop controlled approaches to quantitatively test key insights surfaced by qualitative scholars.

8) **Beyond Paradox, Dialectics and Dualities** – Studies of paradox, dialectics and dualities unpack the complex and often irrational relationships between opposing poles. However, these theories remain constrained, particularly by their focus – two elements in direct

opposition to one another. Can these theories accommodate trialectical relationships (Ford & Ford, 1994) or spark new theorizing? As our world becomes ever more complicated, we wonder whether we could not only add further complexity to these theories, but could contribute new and more intricate lenses.

Conclusion

The timing is ripe for enriching theories of paradox, dualities and tensions to better understand innovation and change. The papers in this special issue begin to do so, provoking great opportunities for an array of future research. We hope that this special issue will not only spawn continued, concerted research to enable increased insight and varied approaches to interdependent contradictions but also challenge us to expand our theoretical insights as we grapple with increasingly complex phenomena.

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Table: Summary of Articles in the Special Issue

Authors	Core Findings Insight on Innovation and Change	Provocation	Level of Analysis	Research Approach	Industry	Phenomena
Hargrave & Van de Ven	Dialectics and paradox studies offer two approaches to understanding interdependent contradictions in the processes of innovation and change. These approaches diverge in introducing power, understanding the role of actors, and framing expectations for outcomes. These varied factors lead us to draw from different approaches.	Intersection of dialectic and paradox studies – How might dialectic and paradox studies better inform one another?	Theoretical model	N/A	N/A	N/A
Sharma & Bansal	Cross-sector collaboratives grappling with tensions between social mission and financial outcomes are more effective when they are approached with flexibility, noting ongoing change in understanding the relationship between poles, rather than holding rigid categories.	Categorical flexibility – How do we recognize and study ongoing change, morphing and emergence of paradoxical poles and tensions, as well as varied approaches to this continuous morphing?	Cross sector collaboration	5 inductive case studies	Manufacturing	Sensemaking in cross sector collaboratives
Calabretta, Gemser & Wijnberg	Strategic decision making accentuates cognitive tensions, unfolding in phases through the interplay between intuition and rationality.	Paradoxical thinking – How might leaders work through paradoxes of strategic decision making? What are roles of emotion, acceptance, outcome framing, and contextualization of intuition-rationality tensions?	Organization	7 inductive case studies	Innovation projects	Strategic decision making
Knight & Sotiorios	Senior leaders face tensions between exploration and exploitation, but vary in their development of interpretive contexts that render salient the interdependence of these contradictions.	Shaping the interpretive context to appreciate interdependence – What is the role of leaders’ practices in accentuating paradoxical tensions and thereby focusing sensemaking? How do such practices help unpack questions about leaders’ abilities to communicate complex ideas about paradox and dualities to others in the organization?	Organization SBU	4 inductive case studies	Media	Senior leadership practices and interpretive context
Jarzabkowski & Le	Paradoxical tensions of a change effort surface and are addressed in the everyday practices of humor and laughter.	To laugh or not to laugh – How does humor compare with other discourse to surface and aid response to	Organization Interpersonal	Single inductive case study	Telecomm	Everyday discourse

		paradoxes that arise amidst organizational change?				
Sheep, Fairhurst & Khazanchi	Discourse surfaces one set of tensions which can thereby spark additional tensions. The impact of these paradoxical 'knots' depends on whether subsequent tensions amplify the initial paradoxes, resulting in paralyzing inactivity, or attenuate the initial paradox, resulting in innovation.	Multiple types of interwoven tensions – How do tensions surface, create and inform other tensions? What factors influence actors' ability to work through and/or become increasingly entangled within knotted tensions?	Organization Interpersonal	Single inductive case study	Print	(Re)acquisition
Cuganesan	Change surfaces optimal distinctiveness tensions in identity – wanting to be similar yet different. The experience of this tension varies across groups within an organization, depending on their relative power, and requiring ongoing, heterogeneous management approaches.	Varied responses by distinct groups – How does change surface varied identity tensions for distinct subgroups? How do these changes shift over time? How might we unpack negotiation processes to explore cyclical dynamics and the fragility of balance?	Organization Subgroups	Single inductive case study	Police force	Identity work
Huq, Reay & Chreim	Power dynamics play vital role in managing interprofessional collaboratives; in order to effectively integrate contributions from each professional group, the collaborative first must change their own interactions to equalize power between groups.	Shifting power dynamic to enable vicious or virtuous cycles – What factors might enable shifts from vicious to virtuous reinforcing cycles? How might power, conflict and interpersonal dynamics influence stuckness or movement?	Interpersonal interactions	Single inductive case study	Health care	Power in interprofessional collaboratives
Keller, Loewenstein & Yan	Chinese and American subjects approach contradictory demands differently. American subjects more often allocate demand to one category or another, Chinese subjects more often adopt multiple, inconsistent categories, allowing them to explore greater paradoxical tensions.	Culturally-informed mindsets – How are our paradoxical mindsets informed by national culture? How might mindsets shift in time? How might insights about paradox at individual and collective levels inform one another?	Individual approaches National culture	Experimental	N/A	Cultural psychology; culturally informed cognition