

RESPONSE

Extending and Refining the Dialectic Perspective on Innovation: There Is Nothing as Practical as a Good Theory; Nothing as Theoretical as a Good Practice

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We have proposed that a dialectic perspective on innovation may serve well as a first step of an integrative framework for research on innovation and for effective practice. We would like to thank all commentators for their stimulating and challenging ideas and SIOP for enabling this dialog. In keeping with the process view inherent to dialectic thinking, we would like to use this reply to refine and extend the core ideas presented in the focal article by means of integrating explanatory concepts, by critically examining the add-on value of a dialectic perspective, and by

pointing out future research needs and ideas for management.

Chance and Logic: A Further Dichotomy of Innovation

We would like to thank Fehr (2009) for emphasizing a stream of theorizing and research we did not explicitly address in the focal article: The evolutionary model of creativity by Simonton (2003) that explains innovation in terms of an evolutionary stochastic process. The evolutionary model states that innovation emerges from blind variation and selective retention with serendipity being a key component of success. Fehr takes this a step further by suggesting two inputs that make best use of the serendipity principle: domain breadth and persistence. We find both Simonton's theory and Fehr's derivations quite compelling. However, from a dialectic perspective the key issue is that innovation is not

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a purely stochastic process. Rather, innovation emerges from, and through, both chance and logic. The key management issue is to integrate and balance both complementary processes.

Extending the work of Campbell (1960), Simonton (1999) has argued that creative achievement follows similar mechanisms as biological evolution. In a series of studies, Simonton has demonstrated that the stochastic mechanisms account well for phenomena on the aggregate level of creative products. For instance, successful creative products of scientists and artists can be described as a probabilistic function of quantity. That is, the more active creators are and the more frequently they make combinations across broad domains, the more likely it is that some successful creative product emerges. Following this line of reasoning, we agree with Fehr (2009) that balancing domain breadth and persistence is a management principle that applies at the individual, team, and organizational levels. Of course, what is deemed to be successful will be largely context and time dependent, and will be dependent upon an organization's ability to exploit the commercial value in new and improved products or processes (King & Anderson, 2002).

However, Simonton's (2003) claim that stochastic rather than deterministic mechanisms explain innovation is limited to the macro level. Concerning the pathways that lead to creative achievement at the micro level (e.g., individual scientists, R&D teams), he stresses the importance of both logical and random chance processes. "Although logic has a role to play at the micro level, inductive and deductive reasoning alone do not suffice to reproduce the psychological phenomenon" (Simonton, 2003, p. 489). Considering that creative ideas are commonly defined as being both novel *and* useful, idea development cannot be explained just by random processes (West, 2002). Divergent thinking and "blind variation and combination" are only one part of the creative process; convergent

thinking and logical evaluation are necessary components as well, for instance, when deciding which of several alternative ideas to selectively retain. Random events and creative processes are likely to play a role throughout the process of innovation implementation; nevertheless, it can also be conceived as a logical problem-solving activity.

We think that Simonton's (2009) approach to creative behavior is very much in line with what we labeled "dialectic." His propositions are antithetical to a purely deterministic explanation of creativity as a subset of problem solving. However, from our perspective, one limitation of this approach is that it pays too little attention to how the integration of complementary processes is achieved by a creator or a team of creators engaged in innovation.

The explanatory concepts of domain breadth and persistence Fehr (2009) has introduced are a valuable extension of the stochastic approach. We agree with Fehr that domain breadth and persistence are complementary and need to be integrated and managed. However, we also believe that some further refinement is necessary. First, innovation does not solely follow stochastic mechanisms but encompasses goal-oriented behavior and logical processes on the side of the innovating individuals, teams, and organizations (e.g., Shalley, 1991). Second, although domain breadth and persistence are a valuable and parsimonious means to frame demands of innovation, they need to be tied to psychological, behavioral, and social processes. Third, we argue that these processes are more conflicting than what it is inferred from a stochastic perspective. Capitalizing on both random processes that increase the variability of ideas and goal-oriented problem solving can be regarded as a further conflicting demand of innovation.

The concept of domain breadth is closely linked to the concept of exploration. Although domain breadth focuses on the content (e.g., concepts) from which new ideas are developed, the concept

of exploration is more process oriented and focuses on the activities of individuals and social systems. From a stochastic perspective, increasing domain breadth of employees' exploratory action is an advisable management strategy if organizations aim at increasing the pool and originality of ideas. Individuals should playfully manipulate different concepts and combine concepts from different domains—all of this more likely leads to the emergence of new useful combinations.

However, and this is a crucial difference, innovation requires more than leveraging the stochastic process by means of increasing domain breadth. Innovation requires more goal-directed problem solving than a purely stochastic approach suggests. During the implementation of innovation, leaders may request employees to narrow the focus of search for new ideas to a particular domain and to develop ideas that closely converge. That means that there is always interplay between the randomness of idea generation and the systematic development of ideas that should solve defined problems—such an approach is different from encouraging random combinations across different domains. The group of companies termed “hidden champions” we have described in our focal article is an example of an approach to innovation that is characterized by focused persistence on a closely defined niche, not by domain breadth, and is yet successful at innovating.

Persistence—the second input likely to increase innovation success—is closely related to two concepts discussed in the focal article: initiative and exploitation. We agree with Fehr (2009) that initiative as reflected in high degrees of effort and persistence is paramount to innovation success. Although persistence is required toward the overall goal of innovation, we think it is important not to persist in any one specific activity extensively but rather to repeatedly shift focus between the different activities that are necessary for innovation, for instance, “random” idea generation, critical evaluation of ideas, and goal-oriented pursuit of implementation.

The notion that dynamic shifting between complementary activities is essential for innovation is expressed in our conceptualization of ambidexterity.

Ambidexterity: Dynamic Shifting Between Complementary Processes

Our dialectic perspective propounds a quintessentially process view and focuses on the dynamics of innovation. The core assumption of the dialectic approach is that complementary and even conflicting cognitions, emotions, and activities need to be integrated for successful innovation to emerge. Because many of these processes rarely co-occur at any point in time, a key issue for innovation becomes thus how individuals, teams, and organizations can shift and oscillate between conflicting processes. The notion of dynamic shifting helps us to elaborate on several dichotomies presented by the commentaries: integration–differentiation (Smith, 2009), prevention–promotion focus (Reiter-Palmon, 2009), thought–action (Ohly & Binnewies, 2009), and logic–chance (Fehr, 2009). Figure 1 illustrates the general idea of ambidexterity: Individuals, teams and organizations need to repeatedly shift between complementary activities (“a” and “b” in the figure) while innovating.

In her commentary, Smith (2009) emphasizes that managing contradictions requires a dynamic approach and extends ideas presented in the focal article. We endorse the idea of ongoing cycles of differentiation and integration as being very much in line with our dialectic perspective. Although the goal of a dialectic approach is to “integrate and manage,” clearly differentiation (e.g., thesis–antithesis) precedes integration. Rather than creating a false and premature synthesis, individuals need to shift focus. We think the example Smith provides on how newspapers extended their business by integrating online publication is a good illustration: Managers shifted between opportunity and threat frames until they were able to

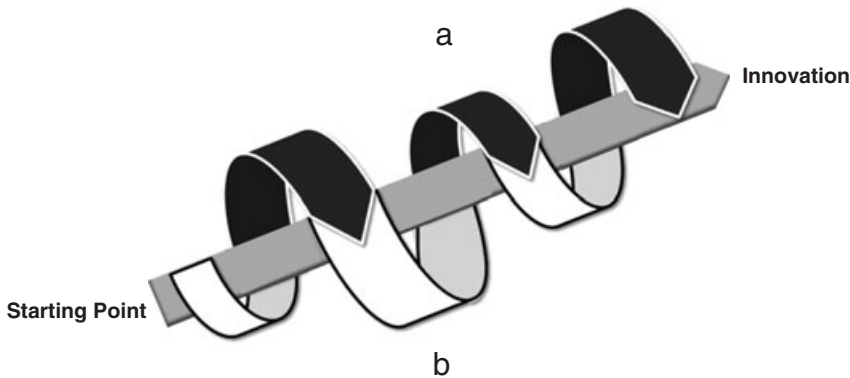


Figure 1. Shifting between the complementary poles (a and b) of a dichotomy: for example, shifting between exploration and exploitation, differentiation and integration, thought and action, promotion and promotion focus, and so forth.

adopt both frames simultaneously. However, we would not label temporal shifting between contradictory activities and frames as a dichotomous strategy. A dichotomous strategy would imply the rigid adoption of either an opportunity or a threat frame.

The idea of dynamic shifting between the poles of a dichotomy is inherent to a dialectic management approach and is reflected in our concept of ambidexterity. Although a dialectic approach is always oriented toward moving beyond contradictions, each synthesis that is achieved will not continue to live on without a future contradiction. We believe that it is important for managers to understand and accept that even when they have worked very hard to achieve a synthesis of conflicting innovation processes, they will still find at a later point in time new contradictions for that synthesis.

Reiter-Palmon (2009) has suggested that regulatory focus needs to be incorporated into a dialectic perspective. We agree and propose that shifting between and integrating promotion and prevention orientation is important during the process of innovation. Although promotion focus is directly change oriented and is particularly important to keep up the drive for creativity and innovation, phases of prevention orientation can be important to the extent that detail orientation and adherence to rules

and guidelines are demanded by innovation. Again, we think that such shifts takes place continuously as described in Figure 1. Kark and van Dijk (2007) suggest that leaders can influence the strength of employees' momentary regulatory focus. Being able to ensure that the dominant regulatory focus of employees is in line with and shifts with the demands of innovation would be an example of what we have defined as ambidextrous leadership. One study demonstrated that successful project managers shifted between an emergent style, allowing bottom-up innovation processes to emerge in the ideation phase, and a planned style, which dominated the implementation phase (Lewis, Welsh, Dehler, & Green, 2002).

The concept of dynamic shifting can also be applied to how emotions influence creativity and innovation. Positive and negative emotions serve different functions in the process of creating, evaluating, and implementing new ideas. Positive emotions lead to broad associations and a heuristic mode of information processing. Negative emotions can signal that effort needs to be invested and can lead to a detailed and analytic mode of information processing (Clore, Schwarz, & Conway, 1994). Thus, negative emotion can not only lead to persistence as the stochastic perspective suggests but also lead to a

different mode of information processing that can be important for the critical assessment of a situation, problem, or new idea. We have found that the ability to shift back to positive emotions after the experience of negative emotions to be an important element for engaging in the innovation process (Bledow, Kuehnel, Schmitt, & Schaupp, 2009).

The concept of shifting raises several important implications for future research. From a dialectic perspective, we suggest that the important characteristic is not only the “content” of the construct, for example, promotion or prevention regulatory focus, but rather the ability to be flexible and shift between the two focuses. Individual differences might not only be related to the extent employees are, for instance, prevention or promotion focused. Individual differences can also be related to the ease with which individuals shift back and forth between different activities and psychological processes. For example, from a stochastic perspective, frequent shifting between divergent, associative thinking and convergent, analytical ways of thinking may increase the likelihood that useful new ideas emerge. Although divergent, associative thinking increases the pool and originality of ideas, analytically scrutinizing ideas ensures that useful ideas are retained.

Future research needs to address the question of what personal characteristics, situational characteristics, and management practices influence the ability to shift focus in accordance with situational demands and to take a dialectic approach. Addressing such questions requires research designs (e.g., event sampling approaches) that allow for an examination of dynamics within individuals, teams, or organization.

A Dialectic Perspective on the Early Stages of Innovation

Several of the commentaries addressed the early stages of the innovation process, specifically the cognitions that precede and compose idea generation (Mumford,

Hunter, & Byrne, 2009; Ohly & Binnewies, 2009, Reiter-Palmon, 2009). In the focal article, we intentionally only briefly touched on the early stages of the innovation process because previous research has primarily focused on creativity and neglected the implementation side of innovation (West, 2002). Our focus was thus the process of innovation in its entirety, not just the early phases of idea generation. However, in response to the commentaries, we would like to highlight a few issues concerning the early stages of innovation that we find particularly noteworthy from our dialectic perspective.

We appreciate Ohly and Binnewies (2009), noting that we oversimplified the relationship between creativity and personal initiative. Clearly, creativity and personal initiative are not the same and taking initiative does not require high degrees of creativity. Personal initiative does, however, imply that employees develop future-oriented ideas for changing some aspect of their work environment. The relationship between creativity and personal initiative addressed by Ohly and Binnewies touches the general issue of the thinking–acting differentiation: From a dialectic perspective, we find it important to note that individuals run through ongoing cycles of generating ideas and taking action to implement ideas. Ideas are not only an initial input to action but also a consequence of action. By acting, individuals create new situations from which additional ideas can be developed.

Reiter-Palmon (2009) focused on the cognitive processes that precede idea generation. We endorse the idea that shifting between and integrating multiple problem representations is more likely to lead to novel problem solutions than early commitment to a single problem representation. From a dialectic point of view, it should be emphasized that a problem representation is not a static cognitive structure. Rather, it is an ongoing constructive process that can be described in terms of synthesizing previous problem representations with new information. The importance of incorporating

new information and changing initial representations is demonstrated by examples of serendipitous innovations, such as the drug Viagra. Viagra was initially developed as a new treatment for high blood pressure and angina. Although it did not have the intended effects, the observation of its side-effects (i.e., frequent erections in the male participants during clinical trials) eventually led to a product with a different purpose and high commercial success. We find it important to note that a given situation can be represented as an opportunity, as a problem, or as encompassing both opportunities and problematic features. We view the ability to see both types of features and to shift between the perspectives as crucial.

Strengths and Limitations of a Dialectic Perspective

Similar to the comments described above, Mumford et al. (2009) are more interested in the early stages of creativity than in the full process of innovation. Mumford et al. argue that sufficient knowledge exists about cognitive approaches to creativity and innovation, which can account for sufficient explained variance in appropriate outcome measures, making the need for a dialectic approach unwarranted. We appreciate their comment because it helps us to sharpen the strengths and limits of our dialectic perspective.

Mumford et al. (2009) reported several studies demonstrating that individuals, who effectively perform cognitive operations that constitute creativity (e.g., problem definition, information gathering, and conceptual combination), develop problem solutions of higher quality and originality. We find it important to disentangle the cognitive processes underlying creativity and did not intend to imply that the succession of thesis, antithesis, syntheses is an alternative model of individual creative cognition. However, we argue that the studies reported by Mumford et al. refer to a narrow aspect of the innovation process as they either

examined creative processes in constrained experimental settings or used outcome measures that were important but only remotely related to innovation (i.e., career advances and critical incident performance in the military; Connelly et al., 2000).

We believe that there may be some apparent misunderstandings that led Mumford et al. (2009) to suggest a dichotomy between a dialectic approach and a cognitive approach. We suggest that a dialectic perspective does not contradict the cognitive approach. Cognition relates to a subset of processes of creativity and innovation, whereas a dialectic perspective concerns a certain way of looking at innovation. Rather than framing the question as either “cognition” or “dialectic,” we think that two separate questions should be asked. First should attempts to understand and manage innovation focus exclusively on cognition? And second, does a dialectic perspective add value to improved management and understanding of innovation?

In relation to the first question, there seems to be a widespread belief among scholars that cognitive variables alone can only explain a certain part of the overall innovation process (this is also manifested in the fact that all other commentators agree implicitly or explicitly with such a belief). The exclusivity of a cognitive fundamental is not warranted. Emotional processes, motivation, serendipity, and more macro-level variables need to be considered for a full theory of innovation (see also Mumford, 2003). Real-world innovation is different from creative processes in well-controlled laboratory settings with predefined tasks and narrow dependent variables. Laboratory studies provide important data, but are deficient with regard to the inherent messiness of innovation implementation in ongoing organizations. We still agree with much that Mumford et al. (2009) are saying and think the results produced by the Mumford group are exceptionally important for innovation research. However, they need to be integrated into a bigger whole of the innovation process.

With regard to the second question we noted above, we concur with Mumford's (2003) earlier statement that "... we need different theories to account for different aspects of creativity" and handle apparent contradiction "by trying to integrate relevant theoretical perspectives" (p. 109). Our goal in proposing a dialectic perspective on innovation was to provide such an integrative framework. This perspective is not a substitute for models that address more specific domains such as the cognitions involved in developing high-quality ideas, the motivational challenges of innovation implementation, or the political processes that determine which innovations are pursued in an organization. Without more specific models that are grounded in empirical observations, the dialectic perspective is of little value. We think a dialectic perspective adds value to models for specific domains by focusing on the tensions and dynamics that can be observed across domains and by overcoming the dichotomies often proposed to address these tensions. Much of the literature on cognition and innovation is rather static, examining cognitive factors in isolation rather than studying their dynamic interaction with noncognitive factors. A purely cognitive approach reproduces the dichotomy of creativity and implementation as being two very different processes that are governed by different approaches. The dialectic approach overcomes this dichotomy and argues that elements of creativity are important in implementation and vice versa.

Practical Implications of a Dialectic Perspective

Guidroz and Denison (2009) emphasized that effective practice demands more specificity than we provided. We agree and provide a number of principles below that can be derived from the state of the science in this area. At the same time, we fear we will necessarily disappoint those who call for simplistic blueprints of "how to innovate." However, we believe that there are

a number of action principles of innovation management, which follow from our dialectic approach:

1. Do not believe in the illusion of the easy manageability of innovation

One of the most important consequences of our dialectic approach is to again draw attention to what has been termed the "illusion of manageability of innovation" (King & Anderson, 2002, p. 162). In an attempt to counter the myriad of oversimplified, "how to manage innovation" books appearing on the popular management bookshelves, King and Anderson (2002) coined this term to suggest that managing the process of innovation was possible but far more complicated than had been suggested in popular texts. The dialectic perspective reifies this point once again and highlights that practicing managers should not fall for simplistic how-to recipes for managing innovation. We pointed out that, all too often, scholars and managers alike underestimated the fact that different pathways can lead to innovation success, that the effectiveness of innovation management practices depend on context and timing, and that specific practices are likely to have positive and negative consequences for different innovation processes. In short, innovation processes can be managed, but innovation outcomes can only be influenced by skillful managerial actions throughout the process.

2. Do not separate new product/service development from exploitation unless absolutely necessary)

We have questioned high degrees of separation of explorative from exploitative activities in organizations. Many case studies have shown that frequent interactions are mandatory for high interactions between exploratory and exploitative activities in organizations (e.g., Holmqvist, 2004). Unfortunately, at this moment in time, there is a lack of empirical evidence supporting either the separation or

the integration strategies. We fully agree with Guidroz and Denison (2009) that in some situations, production demands, organizational culture issues, inertia effects, and so forth may make it necessary to separate those functions at least temporarily. Organizational inertia can necessitate creating a new research-and-development unit because the existing ones are too wedded to a specific approach that has been successful in the past—one well-known example is IBM's development of the PC.

However, the general principle of non-separation still holds over and above specific cases. We, therefore, agree with Smith's (2009) suggestion that temporary deviations from this principle need to be overcome in due time (cf. her comments on SWAT teams). However, we are a bit skeptical about Smith's implicit suggestion that dichotomous approaches to exploitation and exploration can be synthesized at the level of higher management only. Why should higher management (that typically is less well informed) be better than lower levels of the organization at overcoming the dilemmas of exploration and exploitation? In line with sociotechnical systems theory (Cherns, 1976; Clegg, 2000), we suggest that a synthesis is better done at the level of the organization that has the best information available—which is more typically in the lower ranks than in top management.

3. Know that dialectic implies a never-ending development of thesis—antithesis and synthesis

A good example of the dialectic process is writing and publishing scientific articles. Submission of the manuscript (the thesis) leads to the reviews (the antithesis) which in the best case can be addressed and integrated leading to publication (synthesis). Often this synthesis is again used as a thesis that needs an antithesis in another article. We know that there are many disruptions, failures, and difficulties in such a process. As a matter of fact, Smith (2009) is right in pointing to Poole and Van de Ven's (1989) idea that one possible

dialectic management strategy is to let contradictions stand without overly rash attempts to synthesize (in Smith's terms a *false synthesis*).

Knowing that dialectic issues appear in the innovation process helps management to try new approaches and retain what works in given circumstances. This approach becomes wrong if it is too static, for example, when managers say that they had once tried an approach that had failed and use this as an argument that it should not be tried again in a different situation. Internal and external circumstances of organizations may change quickly enough to suggest that one should try again at a later point in time. In addition, approaches that have proven successful need to be repeatedly questioned, as they may have become dysfunctional with changes in internal and external circumstances. All of this is more pronounced in the area of innovation than in any other area of change.

4. Be wary of quick and popular distinctions (e.g., the distinction between incremental and radical innovations)

Guidroz and Denison (2009) use (like the literature) the terms *radical* and *incremental innovations* in different ways: in terms of success of a product (return on investment) and the degree of technical radicalness of a product. In addition, Guidroz and Denison ask whether a new product should be considered an innovation if people do not buy it.

Our response is that there are multiple criteria for radical innovation, such as radical innovation in science, technology, product, process innovation, and market innovation. Not every radical innovation in technology or product results in market innovation. For example, the hydrogen engine was a radical innovation that, in its radicalness, required a number of changes in the working of the engine. From a technological point of view, we would consider it a radical innovation. However, many companies gave up on the problems that this new technology

posed for using it in real-life conditions. In contrast to the radical innovation of a hydrogen engine, Honda's hybrid engine looks like a much more incremental innovation. However, it proved to be more useful and has had a strong effect in the automotive industry. Thus, its influence was radical, but it was the result of incremental steps.

Sometimes market innovation per se, such as packaging food in a quantity enough for one single meal, or in huge quantities, as offered by Wal-Mart, is considered a market innovation breakthrough.

Moreover, a breakthrough can occur at every point of the innovation process—from the point of identifying new needs, through the points of product development, process development, and market innovation. Our dialectic approach suggests that a radically new technology may be a product of a long set of incremental innovations.

5. Manage knowledge flow: Use both knowledge and ignorance in equal measure

The knowledge flow from the environment again holds dialectic tensions. Sometimes it is useful to have more knowledge flow into the system (e.g., by customers), but at other times, for example, when one really wants to produce a new product for a completely different customer base, it may be not the best approach (Christensen, 1997). The general point is that additional conditions determine whether knowledge flow from customers helps or hinders innovation. We agree with Mumford et al. (2009) that organizational scanning has a positive function for creativity and innovation. However, at the same time there are examples in which organizational scanning may actually overload the system rather than help it, and as a result, it may actually hinder innovation.

However, small companies that are often quite ignorant of the intricacies of market forces, product issues, and

so forth may naively assume a certain nontried and nontested way to work that is highly innovative to a certain market—here “ignorance” in the sense of being naïve to the specific problems may be paying off. An example is Microsoft's first operating system that was developed by a few programmers for the new PC developed by IBM. The MS-DOS 1.25 system had many problems in the sense of good usability; however, an enthusiastic crowd of geeks was glad to have computers at low prices with a relatively unsophisticated operating system available.

The general point is this: Different avenues will lead to similarly successful innovations under different conditions—a point well made by a dialectic approach to innovation.

6. Provide discretion and direction to innovators

One of the stable findings of innovation research is that freedom of action, empowerment, and task discretion are important predictors of innovation (Amabile, Conti, Coon, Lazenby, & Herron, 1996). Therefore, fixed and inflexible project management tools will probably inhibit innovation. This does not mean that innovators should not receive clear goals: Quite the opposite—it may help organizations to avoid the chaos trap by providing a clear direction (Brown & Eisenhardt, 1988). However, management tools that dictate the specific activities to be performed, their order, and pace are likely to fall into the bureaucratic trap, which inhibits innovation. Ambidextrous organizations as defined in our focal article find the balance between chaos and bureaucracy. They facilitate exploration and allow skunk teams to work on their own ideas independent of the management guidelines, while, in parallel, they assure that the organizational goals are being met.

7. Be continuously flexible and adaptive when managing innovation

Our concept of an ambidextrous strategy of managing innovation implies that managers

should be flexible in their approach. Because the tensions between the different demands (cf. Table 1 of our focal article) will always exist, management needs to be flexible in shifting from one approach to another. Depending on the situation, ambidextrous leaders should shift from structuring the situation to keeping it free and open to exploration. Under certain conditions, the ambidextrous leader stimulates intellectual curiosity, leading to creative thinking, whereas under other circumstances the ambidextrous leader aligns individuals behind a cohesive vision, leading to successful implementation of the innovative ideas. However, when leaders act incongruent with the changing demands of innovation, such as enforcing cohesiveness in phases of idea generation, creativity and innovation are doomed to fail.

Summary

We propose that innovating is a dialectic process of shifting between competing processes of convergent and divergent thinking, promotion and prevention motivation, positive and negative mood, and strategic management of exploration and exploitation.

Therefore, rather than focusing on one facet of innovation, as commonly done by traditional research on innovation, we propose that future research should investigate the dynamics of the innovation process by taking a dialectic approach.

The implication for management is that managing innovation is a complex task, requiring that managers, first and foremost, have the flexibility to shift between styles in accordance with the different demands of the innovation process.

We attempted to catch all of these moments within our dialectic approach, fully recognizing that this is still a somewhat abstract theoretical perspective that needs to be empirically tested and developed. We hope that this useful interchange stimulates new theorizing on innovation and new practical guidelines for managing innovation.

Conclusion: "There Is Nothing as Practical as a Good Theory; Nothing as Theoretical as a Good Practice"

In their response to our focal article, Guidroz and Denison (2009) rightly reminded us that in developing this theoretical perspective we also needed to further consider the range of practical implications and ramifications that inevitably arise from the dialectical perspective. In an extension of the seminal quote often attributed to Lewin, "There is nothing as practical as a good theory", we would counterpose dialectically that "There is nothing as theoretical as a good practice." We hope to have illustrated this throughout our rejoinder with various examples. Both quotes are the essence of the remit that *Industrial and Organizational Psychology: Perspectives on Science and Practice* seeks to fulfill; we hope that this response has further explained the dialectic perspective on innovation processes in the workplace and has highlighted its value to future research and practice alike.

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