Using cognitive conflict to promote the use of dialectical learning for strategic decision-makers

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Abstract

Purpose – The purpose of this paper is to develop a conceptual model that uses dialectical inquiry (DI) to create cognitive conflict in strategic decision-makers for the purpose of improving strategic decisions. Activation of the dialectical learning process using DI requires strategic decision-makers to integrate conflicting information causing cognitive conflict. Cognitive conflict is the catalyst that stimulates the creation of new knowledge in strategic decision-makers resulting in improved organizational performance.

Design/methodology/approach – A conceptual model is developed that explicitly links DI to the dialectical learning process of strategic decision-makers. This model extends previous research on DI by identifying cognitive conflict as the critical component that links DI as a learning method to the process of dialectical learning in strategic decision-making.

Findings – The major finding of the model of dialectical learning is that the model is an important resource that can be applied to create cognitive conflict in strategic decision-makers for the purpose of expanding the strategic options of organizations.

Research limitations/implications – Empirical research on DI that focuses on the role of cognitive conflict in the dialectical learning process is lacking. It is hoped that this conceptual paper will stimulate further interest on the topic and a greater appreciation of this method of learning. Strategic decision-makers must consider alternative ways of generating new knowledge that is crucial for organizational performance.

Practical implications – It is important that the benefits of creating cognitive conflict in the dialectical learning process are understood by strategic decision-makers. Training for participants in a DI learning intervention is essential to help minimize any dysfunctional behaviors that could result from affective conflict.

Originality/value – This conceptual model identifies the importance of cognitive conflict in the dialectical learning process of strategic decision-makers and the critical role of cognitive conflict rather than affective conflict in the use of this learning method.

Keywords Dialectical learning, Cognitive conflict, Strategic management, Dialectical Inquiry, Synthesis, Knowledge creation, Decision making

Paper type Conceptual paper

Introduction

Dialectical inquiry (DI) is a method of learning organizations can implement to increase strategic decision-makers' knowledge base and learning capacity. Because DI has a potentially significant impact on improved strategic decision-making and

organizational learning, more specific treatment is needed pertaining to how it affects the individual learning process. Little attention has been given to the nature of individual dialectical learning processes and their relationship to organizational learning.

Existing literature that discusses the DI learning method has focused on how the implementation of DI can improve strategic decision-making. However, this literature has not developed the specific theoretical link between the use of DI and its impact on the individual learning process that is ultimately necessary for improving the performance of strategic decision-makers. Therefore, the purpose of this paper is to develop a conceptual model illustrating the effect DI has on the strategic decision-makers' learning process in organizations.

First, I provide a brief historical review of the Hegelian Dialectic. The dialectical process involves a party formulating an argument or thesis, while another party forms a counter-argument, the antithesis. Integration of the thesis and antithesis is designed to create a synthesis, or higher understanding of a problem or situation. Second, I discuss the dialectical process based on a theoretical abstraction in the context of organizational learning. Organizations learn dialectically by observing the interaction between themselves and their environment. This interaction creates conflict and contradiction that is necessary in order for organizations to benefit from dialectical learning. Third, I review the literature on how DI has been used in previous strategic management research. Existing research has focused on using DI as a learning method but has not linked this method of learning to cognitive conflict in the dialectical learning process of strategic decision-making. Fourth, the dialectical learning process is examined. I establish the critical theoretical link between the use of DI as a learning method and how this method creates cognitive conflict activating the dialectical learning process of strategic decision-makers. Fifth, I extend previous DI research by developing a conceptual model of the dialectical learning process for strategic decision-makers and discuss its importance. This model formalizes the dialectical learning process of strategic decision-makers. Sixth, I discuss why organizations may have not widely adopted the use of DI in strategic decision-making. Cognitive conflict may be confused with affective conflict causing organizations to misperceive the benefits of using DI. To encourage the use of cognitive conflict in the dialectical learning process and minimize affective conflict, I stress the importance of training when implementing DI in research or practice. The last section offers concluding remarks.

A brief history of the Hegelian Dialectic
Dialectical inquiry (DI) is an intellectual discourse that originated with the work of nineteenth-century philosopher G.W.F. Hegel (2010). Hegel contended that higher levels of understanding and insight could be achieved by creating the two most diametrically opposed viewpoints or explanations to a given situation or problem. Two opposing views (a thesis and antithesis) are developed in order to create direct conflict between two parties. Following a structured debate, a new collective view is pursued, forming a synthesis. The differing parties base their positions on identical databases. Points of view are influenced by underlying assumptions, value systems and cognitive abilities (Huber, 1991; Boerner *et al.*, 2003; Scott, 2011). Van Gigch (1978) notes that the Hegelian Dialectic or the Hegelian Inquiring System is the foundation of many of our

political and legal processes. For example, in a court of law, the basic premise of DI can be observed. A prosecuting attorney representing his client would form a thesis, while the defense attorney would form a counter-argument or antithesis in support of the defendant. After hearing both arguments, the judge or jury would then reach a verdict or synthesis. The Hegelian Inquiring System attempts to seek the truth for the purpose of improved decision-making by direct confrontation of thesis and antithesis, from which a synthesis can be sought. Hegel's philosophy has been a historic approach to problem-solving and an effective technique for clarifying opposing viewpoints.

More generally, DI is a creative problem-solving process that requires an integration of previously dissociated ideas or facts for the purpose of gaining a deeper understanding of a problem or situation. An important implication of this process is the learning that occurs. As many management scholars have pointed out, learning occurs within the framework of dialectical processes (Argyris and Schön, 1978; Nonaka, 1994 Argyris, 1999; Comas and Sieber, 2001; Cors, 2003; Richardson, 2003; Israelstam, 2007; Chaves, 2008; Scott, 2011).

Organizational learning and the dialectical process

Within the context of DI, Simon (1996) has defined organizational learning as the growing insights and successful restructuring of problems by members of the organization. Viewing how organizations learn dialectically with their environment provides a theoretical basis for understanding DI as a learning method. Understanding dialectical processes from an organizational learning perspective instills the philosophical interpretation of the Hegelian Dialectic that underlies DI's importance as an applied method of learning.

Dialectical learning is based on a theoretical abstraction that attempts to understand how interaction between an organization and its environment affects organizational learning. The result of this interaction creates conflict between the organization and its environment, requiring new integrations or reinterpretations. In terms of the dialectical process, conflict is considered a necessary ingredient for learning to occur. Random crises and unexpected turbulence between an organization and its environment can be important events that stimulate organizational learning leading to strategy formulation and development. Within the dialectical process, learning and resulting development will occur only when conflict and contradictions are present. Contradiction is necessary in order for development to occur. Dialectical processes that create conflict are means of heightening organizational learning by improving actions through better knowledge and understanding (Fiol and Lyles, 1985). According to Fitzgerald (1980):

> In Hegelian terms, we would state that certainty always contains uncertainty, that to know something is also to doubt it.
>
> The process of learning is defined as the constant attempt of the organism to maintain a connection between its systems and the systems of the environment. Such a connection can be termed an informed state. Since both sets of systems are in constant flux, even associative learning processes are an active adaptional process. Thus when an organism is said to have learned, this must be regarded as a fundamentally transient state, and the organism will continue to respond because the tension is chronic (p. 379).

By placing the locus of dialectical learning between the organization and its environment, their interaction more clearly establishes an interdependent learning

relationship. The challenge of a dialectical learning relationship is that reciprocal actions between an organization and its environment create a learning situation in which "each variable is both the cause and the effect of the other" (Fitzgerald, 1980). Dialectical inquiry requires this reciprocal interaction between the organization and its environment because the theory of dialectical learning predicts that conflict and contradiction will provide the motivation toward becoming a more informed organization, resulting in improved performance.

If organizations desire to improve their performance by gaining a better understanding of the reciprocal changes that occur with their environment, they must assess viable strategies to cope with a greater awareness so they benefit from their learning experiences. Because new information can create conflict and contradiction, the organization will develop by actively attempting to resolve the chronic tension described previously (Fitzgerald, 1980). Ideally, the organization will develop and become capable of more complex thought and continue to learn dialectically throughout its lifespan. It will actively attempt to gain information by observing the interaction between itself and its environment (Fitzgerald, 1980). As the organization gains experience interpreting information dialectically, the essence of dialectical development will manifest itself in reducing the tension between knowing and not knowing. Any subsequent tension created will be between what has become known and what has become the new unknown (Fitzgerald, 1980). Dialectical development is the ongoing transformation of learning that is necessary to cope with conflict, contradiction and tension that is created between an organization and its environment. Figure 1 illustrates and summarizes the dialectical process in the context of organizational learning.

Literature review of dialectical inquiry in strategic management applications

Research on the use of the DI technique began 40 years ago and was designed to improve corporate strategic decision-making, planning and policy determination (Mason, 1969; Cosier *et al.*, 1978; Mitroff and Emshoff, 1979; Cosier and Alpin, 1980; Schwenk and Cosier, 1980; Cosier, 1983; Sussman and Herden, 1982; Schwenk, 1982; Mitroff, 1982a, b; Belohlav and Sussman, 1983; Chanin and Shapiro, 1985; Schweiger *et al.*, 1986). Most of this research has been theoretical or focused on methodological issues. A comprehensive search of databases indicates that very few empirical studies have been done. Two important studies were conducted by Mason (1969) and Schweiger *et al.* (1986).

Mason (1969) developed and applied DI for the purpose of examining the assumptions of strategic planners in a "debate group" context. Two debate groups are involved in using the DI method. One group represents the thesis while the other group forms the antithesis. Mason suggested two criteria that DI should be able to discover in the planning process:

(1) It should expose the underlying assumptions of a proposed plan so that management can reconsider them.

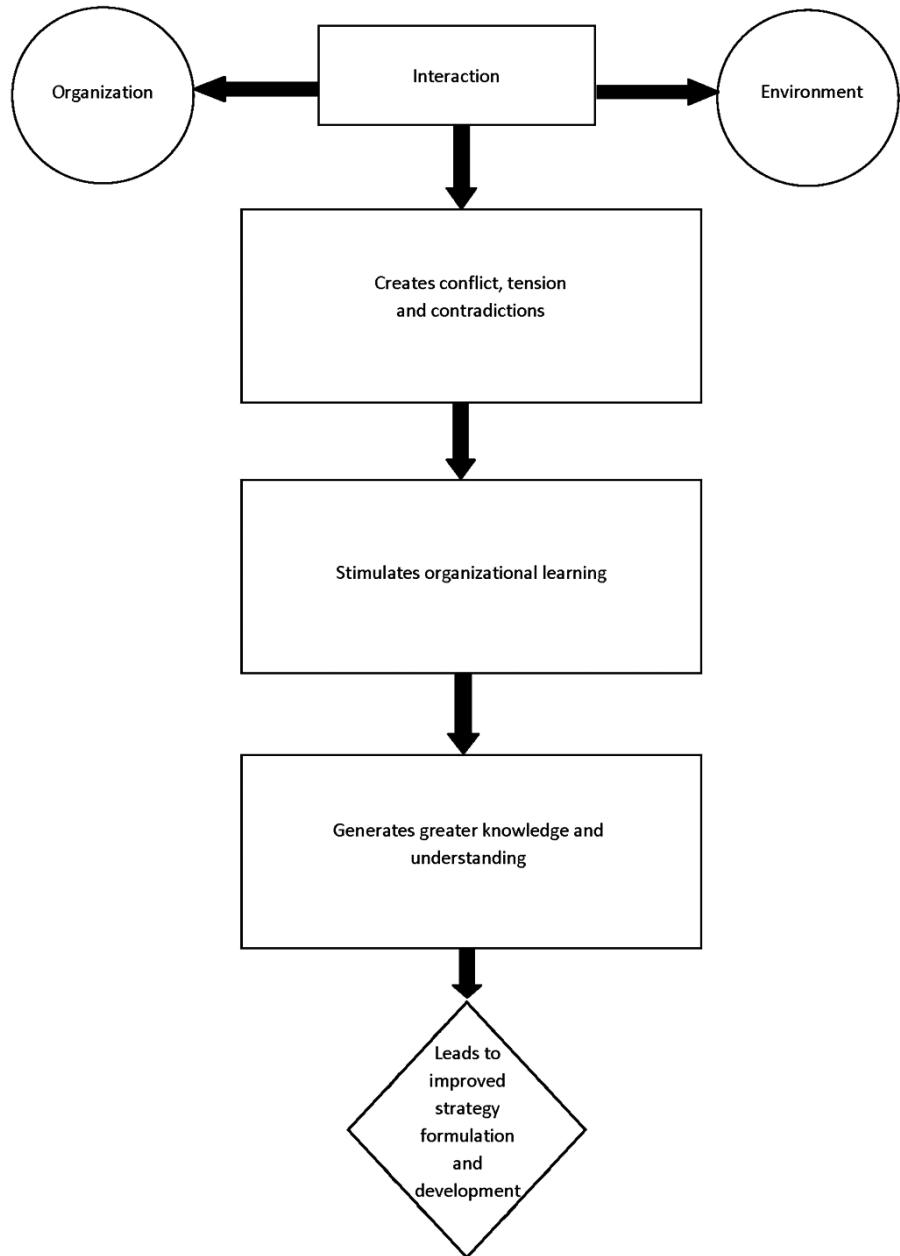(2) It should suggest new and more relevant assumptions on which the planning process can proceed.

Figure 1.
Organizational learning
and the dialectical process

Mason believed that once management is made aware of these assumptions, it can reconsider or reformulate them. According to Mason (1969):

> The principle theme of dialectical advise is that management learns about the fundamental assumptions of its planning problem and comes to understand them by observing the conflict between the plan and the counter-plan and their attendant world views. The vehicle for including this reflection is a structured debate [. . .] The structured debate consists of the most forceful presentation possible of the two most opposing plans, given the constraint that each side must interpret, in its entirety, the same organizational data bank. Following a statement of the problem, the structured debate begins with the advocate of the plan stating his world view or model of the situation. The advocate of the counter-plan does likewise. Then, as each item of data is introduced, it is interpreted by the opposing advocates to demonstrate that it can be interpreted as supportable evidence of their plan and negative evidence for their opponent's plan. This process continues until the data bank is exhausted [. . .] Hegel's theory leads us to predict that the manager – observer of the conflict – will integrate and form a new and expanded world view (the synthesis). The synthesis includes exposing hidden assumptions and develops a new conceptualization of the planning problem the organization faces (p. B408).

In Mason's (1969) initial field study, where he implemented the DI technique in a strategic planning exercise, one executive observed, "The two well-developed points of view pull you both ways at the same time. It becomes the vehicle for amalgamating the best plan of action you know how to develop." This result lends support to the formation of a synthesis using the DI technique.

Laboratory studies have also been conducted to determine the effectiveness of DI. Schweiger *et al.* (1986) developed an experiment involving M.B.A. students in a corporate strategy and policy course. A case study was assigned to different groups dealing with strategic problems. The two groups were instructed to critically evaluate the case based on the same data. The first group would develop a list of assumptions and recommendations and provide the second group this information. The second group was instructed to come up with a different set of assumptions and recommendations that negate the first group. The objective of the DI was to debate the case based on the two groups' different assumptions and arrive at a final set of assumptions acceptable to both groups. The researchers found that the two groups made significantly higher quality recommendations (the synthesis) by bringing their assumptions to the surface.

The dialectical learning process
Mason's research (including Schweiger *et al.* (1986) study) missed the critical theoretical link between the use of DI as a learning method and how this method activates the dialectical learning process. Activation of the dialectical learning process creates cognitive conflict for strategic decision-makers enabling them to create new knowledge from the growing insights that are discovered as a result of dialectical learning (Nonaka, 1994; Davenport and Prusak, 1998). Previously dissociated ideas and facts merge to create the best plan of action or decision. Dialectical learning increases strategic decision-makers' learning capacity, creating a greater number of strategic options (Burgelman, 1983; Cohen and Levinthal, 1990; Buchel and Probst, 2000; Boerner *et al.*, 2003; Alajmi, 2010; Scott, 2011).

Dialectical inquiry activates the dialectical learning process using what in DI is referred to as debate groups who juxtapose information that has alternative

interpretations of meaning. Conflicting information creates cognitive conflict in the learner/observer of the process. This learning process requires an assimilation or convergence of the conflicting information. The result of integrating conflicting information generates cognitive conflict creating new knowledge enabling strategic decision-makers to update their knowledge base. This learning process creates a new conceptualization of the problem (synthesis), leading to improved decision-making and strategic performance (Nonaka, 1994; Buchel and Probst, 2000; Cummings, 2003; Boerner *et al.*, 2003; Scott, 2011).

Because the use of DI has a potentially significant impact on improved decision-making, a more detailed explanation of how it affects strategic decision-makers' learning process would be most useful. This is because the use of DI and its impact on dialectical learning is particularly relevant to strategic decision-makers since their decisions will have an impact on an organization's long-term performance. Therefore, a better understanding of how DI can assist decision-makers in strategic management practices is highly valuable to learning organizations (Fiol and Lyles, 1985; Dodgson, 1993; Buchel and Probst, 2000; Cors, 2003; Cummings, 2003; Wang and Ellinger, 2008; Scott, 2011; Mills, 2011).

The aim of dialectical learning is to critically analyze new ideas by linking them to previous knowledge so a deeper understanding of problems can result (Atherton, 2010). A structured debate format such as DI is highly desirable because it provides opportunities for tangible learning experiences that can become a formalized part of an organization's strategic decision-making process. Strategic decision-makers can develop greater insights pertaining to problems when opposing ideas are formally debated rather than being ignored. It is important that learning occurs during the strategic decision-making process and not only after decisions are made. Strategic decision-makers who participate in DI develop insights and learn from observing debate-group interaction. Therefore, in the context of dialectical learning, organizational members who comprise the debate groups become the agents for the transfer of learning (Argyris and Schön, 1978).

A model of dialectical learning

Much of the organizational learning research has used the firm as the unit of analysis (Amo and Kolvereid, 2005; Wang and Ellinger, 2008). However, some management scholars suggest that organizational learning is based on individual level efforts that contribute to organizational performance (Huber, 1991; Simon, 1991; Dixon, 1992). This conceptual paper focuses on individual learning in the context of DI by using the concept of debate groups as the learning source and the strategic decision-maker as the learning recipient. Ultimately, improving the knowledge base of key decision-makers is expected to result in improved organizational performance (Simon, 1991; Wang and Ellinger, 2008).

Many management scholars have pointed out that prior experiments using DI do not capture the richness of learning, the group processes at work and their significance (Mitroff, 1982b; Easterby-Smith and Araujo, 1999; Bapuji and Crossan, 2004). Gaining a better understanding of the dialectical learning process of strategic decision-makers would help shed light on the effectiveness of DI as a learning technique.

Dialectical inquiry may be viewed as a "trigger strategy" in the sense that opposing viewpoints create cognitive conflict providing a trigger or catalyst for learning to take

place. Observing conflicting information generates the cognitive conflict needed for stimulating the dialectical learning processes of decision-makers for the purpose of producing systematic knowledge.

Dialectical inquiry creates cognitive conflict providing the stimulus for learning to occur. The structured debate groups serve as the learning source. Assumptions are determined from the content of the plan or exercise and each group's collective experience. These assumptions or prior beliefs may be viewed as the foundation of each group's initial position (Boerner *et al.*, 2003). The initial position each group takes composes the thesis for one group and the antithesis for the other. Each debate group will interpret identical data to support its collective position. Data which can be qualitative or quantitative are the raw material provided to each debate group and in their simplest form, are "discrete, objective facts about events" (Davenport and Prusak, 1998). Data by themselves are not very useful for each debate group until they are put into context (Davenport and Prusak, 1998). It is in the interest of each group to use the data to build the strongest case possible and then interpret the data to negate its opponent's position. Ultimately, data validate or invalidate each debate group's assumptions, creating conflicting information observed by decision-makers (Scott, 2011). David and Foray (2003) define information as structured and formatted data that remain passive and inert until used by those with the knowledge needed for interpretation and processing. Here, knowledge is defined as true and justified beliefs acquired empirically (Dretske, 1981; Nonaka, 1994). It is actively constructed in the human mind and is the most strategically important resource an organization possesses (Grant, 1996; Richardson, 2003).

In essence, DI serves as a learning method observed by strategic decision-makers. Debate groups produce a flow of conflicting messages causing cognitive conflict in strategic decision-makers (Nonaka, 1994). This learning stimulus activates the cognitive learning processes of the decision-maker accessing his knowledge base stored in long-term memory. If the problem is ill-structured, (a common occurrence in strategic planning) reliance on the resources of long-term memory can be extensive (Simon, 1991). Thinking and learning occur in the observer/ decision-maker's working (short-term) memory. Prior knowledge stored in long-term memory provides a context for synthesizing conflicting information transmitted from debate groups' interaction. The new knowledge created in the working memory updates the knowledge base in the strategic decision-maker's long-term memory (Derry, 1996).

For DI to be an effective learning strategy, it should create enough cognitive conflict in the strategic decision-maker to foster the retrieval of information from long-term memory helping to stimulate sudden insight. This new insight alters the whole character of the problem and transforms it into one that can be solved more creatively. The strategic options generated resulting from dialectical learning are a function of the strategic decision-maker's learning capacity (Burgelman, 1983; Cohen and Levinthal, 1990; Buchel and Probst, 2000; Boerner *et al.*, 2003; Alajmi, 2010; Scott, 2011). Figure 2 illustrates and summarizes the model of dialectical learning.

Strategic decision-makers must understand the process of dialectical learning in order to successfully implement DI as a formal part of their organization's strategic decision-making process. Their understanding of the dialectical learning process will enable them more easily to explain the benefits of this learning process to debate group members. The benefits of creating cognitive conflict for strategic decision-makers,
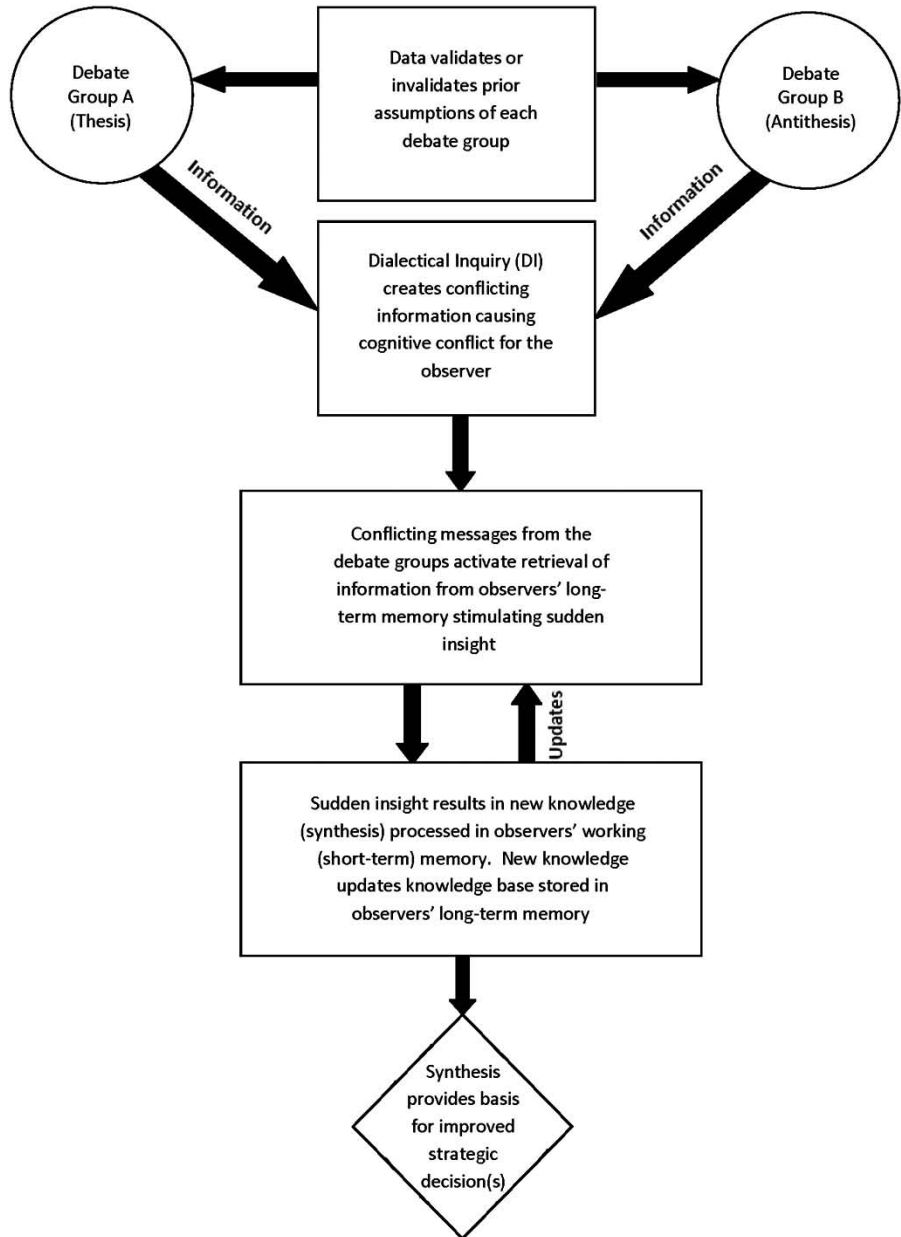
Figure 2.
A model of dialectical
learning

i.e. knowledge creation, must be explicitly linked to improved strategic performance and the achievement of organizational goals.

Using dialectical inquiry in research and practice: the role of cognitive conflict
The application of DI to dialectical learning processes in strategic decision-making can be an intellectually satisfying endeavor for strategic decision-makers. Though DI has the ability to generate new knowledge critical for improving strategic performance, it has not been widely adopted. This is unfortunate as strategic decision-makers who collect extensive information before making strategic decisions will have more accurate perceptions of environmental conditions which have been shown to relate to improved organizational performance (Bourgeois, 1985). Further, Burgelman (1991) has argued that creating an atmosphere where strategic ideas can be freely championed and fully contested by anyone with relevant information may be a key factor in generating viable organizational strategies. Organizations have the power to influence the success of strategic decisions through the processes they use to make key decisions (Dean and Sharfman, 1996). It is likely that the dialectical learning process has been underappreciated because DI requires the use of conflict to serve as a catalyst for learning. If organizations perceive conflict as something to avoid in strategic decision-making, the benefits of implementing DI will never be realized. Avoiding conflict could potentially reinforce the status quo. One major problem is that organizations may confuse cognitive conflict with affective conflict. Cognitive conflict is task oriented. This type of conflict should be encouraged because it can enhance organizational performance (Amason, 1996). Cognitive conflict must be viewed as the fuel that drives learning and enables innovative strategic solutions. It is an energy source for strategic decision-makers creating opportunities for growth and change (Andrade *et al.*, 2008).

Affective conflict is personalized disagreement and can be destructive (Amason, 1996). It is critical that debate group members understand their role in DI so as to minimize any affective conflict that could result during debate-group interaction. Therefore, before experimenting with DI, there are some emotional aspects of information generation between debate groups that must be considered. These aspects of the dialectical learning process need to be considered an important part of a proposed research design. Dialectical inquiry can be an emotional experience for some members of debate groups, so it is worth discussing this limitation.

Williams (1983) notes that the effective use of opposition or contradiction by individuals is related to psychological health and creativity. Observing the dialectical process is a form of higher-level (deep) learning involving a substantial amount of cognitive effort on the part of the strategic decision-maker. However, if DI creates affective conflict between some members of debate groups, dysfunctional behaviors could result (Fiol and Lyles, 1985). Cognitive conflict can improve strategic decision-making, but affective conflict may weaken the ability of debate groups to work in the future. In order for groups to effectively debate in ways that promote respect, consideration and understanding while incorporating other people's perspectives, it would seem that a great deal of maturity would be required. Debate group members need to be able to support their position while preserving their working relationships (Tjosvold *et al.*, 1981; Nonaka, 1994; Cummings, 2003).

Schmidt (1974) notes six potentially negative outcomes of conflict as it relates to debate-group interaction:

(1) Some people will feel defeated and demeaned.

(2) Distance between people could increase.

(3) A climate of distrust and suspicion could develop.

(4) People and departments that need to cooperate may only look after their own narrow interests.

(5) Resistance – active or passive – could develop where teamwork is needed.

(6) Some people may feel left out because of the turmoil.

Clearly, because of these limitations, the implementation of DI as a structured source of learning for strategic decision-makers would require training. When a learning intervention is managed skilfully, Tjosvold *et al.* (1981) found conflict in decision-making can have constructive consequences. Their study found conflict can be used to facilitate the exchange of information when participants become skilled at disagreeing while confirming each other's competence and expressing acceptance of each other as a person.

Conclusion

The learning implications of DI provide the critical link between debate group interaction and the achievement of a synthesis in strategic decision-making. Conflicting information associated with debate groups' contradictory positions creates cognitive conflict in the strategic decision-maker which is a necessary component of dialectical learning. The implication is that information cannot be completely understood unless juxtaposed against alternative poles of meaning used to support the assumptions of each debate group (Slife, 1983). It may be difficult to conceptualize many ideas needed to solve problems and make strategic decisions without an opposite interpretation of meaning.

The complexities associated with dialectical learning will call for some innovative research designs. Interdisciplinary researchers should collaborate to further develop this research area (Dodgson, 1993).

It is also hoped that practitioners will view DI as a powerful strategic decision-making model they can use to improve the quality of strategic decisions. The implementation of the DI learning technique will require extensive training and careful selection of debate group members. This training must focus on how DI can be used to improve organizational performance while minimizing any potential dysfunctional behavior between debate groups resulting from affective conflict. Because organizations learn through their members, DI is an important learning method for activating the dialectical learning process of strategic decision-makers for the purpose of improving organizational performance.

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