A DYNAMIC MODEL OF TOP MANAGEMENT TEAM EFFECTIVENESS:

MANAGING UNSTRUCTURED TASK STREAMS [1]

Amy Edmondson
Associate Professor
Harvard Business School
Boston, MA 02163
617-495-6732 phone
617-496-5265 Fax
aedmondson@hbs.edu

Michael Roberto
Assistant Professor
Harvard Business School
Boston, MA 02163
mroberto@hbs.edu

Michael Watkins
Associate Professor
Harvard Business School
Boston, MA 02163
mwatkins@hbs.edu

December 11, 2002

A DYNAMIC MODEL OF TOP MANAGEMENT TEAM EFFECTIVENESS:

MANAGING UNSTRUCTURED TASK STREAMS

ABSTRACT

Leadership research relating top management team demographics to firm performance has produced mixed empirical results. This paper suggests a new explanation for these inconsistencies. We first note that a given top management team (TMT) is likely to face a variety of different situations over time. Thus, while TMT demographic composition is relatively stable, the TMT task is dynamic and variable. In some situations, team members have similar information and interests (a symmetric distribution); in others, information or interests diverge (an asymmetric distribution). Based on team effectiveness theory, we then argue that, unless group process is managed accordingly, asymmetric distributions of situation-specific information and interests will reduce TMT decision-making effectiveness. We develop leader process choices to mitigate the potentially harmful effect of these asymmetries. These arguments form the basis of a theoretical model of TMT effectiveness that integrates insights from research on leadership, group decision-making, team effectiveness, and negotiation, and has practical implications for how leaders of senior teams can improve team effectiveness through appropriate process choices.

Encouraging the CEO and senior executives to work as a team has been suggested as a way of enhancing strategic leadership effectiveness in complex organizations. Through strategic leadership (Boal & Hooijberg, 2000), an organization maneuvers forward into an imperfectly known future, making commitments to some opportunities while turning away from others. Many practitioners and scholars have argued that teamwork at the top promotes the generation of creative ideas and multiple alternatives, enables executives to utilize diverse experience to solve difficult problems, and increases involvement and commitment of key senior executives (Ancona & Nadler, 1989; Bauman, Jackson, & Lawrence, 1997; Nadler, 1996). A top management team (TMT) provides a way to cope with the turbulence and complexity in the external environment that has complicated the task of executive leadership (Hambrick, 1998; Janofsky, 1993; Nadler, 1998). Teamwork allows the CEO to engage in a participative group process through which diverse members wrestle together with difficult issues to make decisions and build commitment to implementing them, giving rise to strategic leadership effectiveness.

At the same time, considerable research and anecdotal evidence suggest that TMTs often fail to achieve their potential. Scholars have found that many senior groups fail to engage in real teamwork (Hackman, 1990; Hambrick, 1994; Katzenbach, 1998). Others have reported that TMTs can find it difficult to resolve conflict (Amason, 1996), build commitment (Wooldridge and Floyd, 1990), or reach closure in a timely fashion (Eisenhardt, 1989; Harrison, 1996; Hickson, et al., 1986). Several in-depth case studies document how dysfunctional group dynamics can lead to errors in judgment and flawed decisions. Notably, Janis' (1982) early work on groupthink attributed certain foreign policy fiascoes to the pressures for conformity that arise within cohesive senior groups, and Ross and Staw (1986; 1993) conducted case studies examining how groups of senior executives escalate commitment to failing courses of action.

These leadership failures can be explained by an inability to manage team process effectively.

Team researchers use the term "process losses" (Steiner, 1972) to describe situations in which groups fail to perform well, despite having sufficient resources, diversity of experience, or other advantages that should facilitate achieving team goals. Well-documented process losses include pressures for conformity that lead to premature convergence on a solution (Janis, 1982; Taras, 1991), the failure to disclose all relevant information that group members possess (Stasser, 1999), and a series of other coordination and motivation problems. Although these process losses in TMTs are likely to reduce decision quality and overall team effectiveness, the question of what factors might enable senior teams to be less vulnerable to them has not been addressed in the research literature.

This article develops implications of research on group interaction processes for TMT effectiveness. Instead of using relatively stable team characteristics such as demographic composition to explain differences in TMT effectiveness, we focus on the dynamic relationship between the team and the different situations it faces over time. We propose that the same team composition will have a different effect on team effectiveness depending on situation-specific distributions of information and interests.

Team effectiveness includes three dimensions (Hackman, 1987): (1) the degree to which a team's decisions enhance organizational performance (e.g, Hambrick, 1994), (2) members' commitment to implementing team decisions and willingness to work together in the future (Amason, 1996; Nadler, 1996; Schweiger, Sandberg, & Ragan, 1986), and (3) the extent to which team process meets members' growth and satisfaction needs (Hackman, 1987; Hambrick, 1994). *Situation-specific distributions* refer to the distinctive information or interests held by different team members in a specific situation. Unless group decision-making processes are managed accordingly, asymmetrical distributions of situation-specific information or interests may reduce team effectiveness. We therefore develop a set of process choices through which leaders can mitigate these potentially harmful effects, producing greater alignment between situational factors and group processes.

AN INTEGRATIVE APPROACH

Two streams of leadership research have implications for understanding TMT effectiveness. The first, strategic leadership research, employs a macro lens to study effects of TMT demographics on organizational effectiveness, positing that team decision-making process mediates this relationship; the second, supervisory leadership research, employs a micro lens to examine leader decision-making behavior within a firm (Boal & Hooijberg, 2000). A central focus of the second stream is the extent to which leaders seek and use input from others in making critical decisions, clearly an important issue for understanding TMTs. We review elements of both streams of research as a foundation for proposing an integrative approach.

TMT Demographics Research

The "upper echelons" literature (Hambrick & Mason, 1984) attempts to link the attributes of the firm's leaders with strategic choices and organizational outcomes. Using TMT demographics as proxies for psychological characteristics, researchers relate variables such as age, tenure, education, and functional background to organizational outcomes such as sales growth, innovation, and executive turnover (e.g. Bantel & Jackson, 1989; Eisenhardt & Schoonhoven, 1990; Finkelstein & Hambrick, 1990; Keck & Tushman, 1993; Murmann & Tushman, 1997). TMT composition also has been used to predict team communication and conflict (e.g., Knight, et al., 1999; Miller, Burke, & Glick, 1998; Papadakis, et al., 1998; Smith, Smith, Olian, Sims, O'Bannon & Scully, 1994). This stream of research employs an input-process-output model, focusing predominantly on the relationships among certain inputs and outputs with less attention to intervening process variables.

Although many studies have found a relationship between demographic variables and outcomes, they have produced conflicting results. For example, Murray (1989) found that tenure heterogeneity was associated with higher performance among firms in the oil industry; Eisenhardt

and Schoonhoven (1990) found that tenure heterogeneity was positively associated with revenue growth for semiconductor firms, and Murmann and Tushman (1997) discovered that tenure heterogeneity was associated with faster responses to environmental change in the cement industry. At the same time, other research found that tenure heterogeneity is *negatively* associated with firm performance (O'Reilly & Williams, 1998). Hambrick, Cho and Chen (1996) found that heterogeneous teams responded more slowly to competitors' actions in the airline industry; Wagner, Pfeffer and O'Reilly (1984) reported that teams with high tenure heterogeneity tended to experience more turnover, and Smith, et al. (1994) showed that tenure heterogeneity was associated with lower returns on investment in a sample of 53 high-technology firms.

Faced with these inconsistencies, scholars have identified several important limitations of the TMT literature. First, demographic characteristics are, at best, imperfect proxies for psychological constructs (Boal & Hooijberg, 2000). Second, TMT research pays "too little attention to the actual mechanisms that serve to convert group characteristics into organization outcomes" (Hambrick, 1994: 185). Thus, the literature cannot explain how and why certain demographic attributes affect outcomes, nor provide definitive conclusions regarding the direction of causality (Bower, 1998; Hambrick, 1994; Pettigrew, 1992). Few studies have measured intervening group processes in addition to demographics and outcomes; in most, process mechanisms are assumed rather than measured directly. In a rare exception, process was measured directly and was a stronger predictor of performance than demographic composition (Smith, et al, 1994); nonetheless, enthusiasm for composition as a proxy for process remains strong because of the relative ease of obtaining demographic over process measures.

Third, most demographic studies fail to account for the impact that situation-specific factors have on team process and performance (Papadakis, et al., 1998). TMT effectiveness may vary greatly from one situation to another (Janis, 1982; Katzenbach, 1998). Because TMT

composition changes infrequently, demographic analysis clearly provides an incomplete explanation of variation in a team's performance over time. This suggests a need for additional theory to explain how situational factors and team attributes work together to shape TMT processes and outcomes.

Situational Leadership Research

A substantial body of research on leadership behavior within organizations does focus on situational contingencies (Evans, 1970; Fiedler, 1967; Hersey & Blanchard, 1969; Vroom & Yetton, 1973). These scholars argue that leaders need to adjust their style/approach based upon the circumstances and conditions that they encounter in their organizations and environments. Normative decision theory (Tannebaum Schmidt, 1958; Vroom & Yago, 1988; Vroom & Yetton, 1973) focuses specifically on how leaders make decisions in conjunction with their management team, and it suggests that leaders ought to interact differently with their subordinates based upon situational attributes. Vroom and Yetton (1973) argue, in particular, that leaders should invite more or less subordinate participation during a decision-making process depending upon situational characteristics such as the importance of the quality of the decision, the level of time pressure, and the extent to which subordinate commitment is critical to successful implementation. Leaders' process choices in this model range from highly directive (making the decision without input from subordinates) to highly participative (working with subordinates to develop and evaluate alternatives and then reach a consensus on the final decision).

Empirical studies have found substantial support for normative decision theory's propositions (Field, 1982; Vroom & Jago, 1988), suggesting that a situation-contingent approach to decision-making processes within the TMT is also worth pursuing. However, normative decision theory deals only with the issue of *whether* to utilize a team to make a decision, not *how* to manage a team process to produce optimal outcomes. Its propositions do not help leaders avoid the "process

losses" that groups encounter on a regular basis (Steiner, 1972). Moreover, normative decision theory focuses on characteristics of the situation or decision itself, rather than examining how certain situation-specific attributes of the team might affect a leader's process choices.

Summary

The demographics literature focuses on composition as the critical predictor of team effectiveness and takes the team as the appropriate unit of analysis for assessing effectiveness. Empirical research has used relatively stable and deterministic causal models that do not address how team processes and outcomes might vary across the multiple situations faced by senior teams. This work assumes a consistency of conditions and team performance that is unlikely to exist in real TMTs, and it under-specifies the role of process and leadership.

Normative decision theory, in contrast, takes the decision as the unit of analysis and prescribes different leader behaviors accordingly. This work addressed whether or not the leader should employ a team, rather than how leaders might employ different kinds of team processes in different situations. We suggest that an integrative model of TMT effectiveness should focus on the leader's role in managing the team process in ways that reflect situational factors.

In the next section, we identify critical characteristics of TMTs that vary with the situation and address implications of this variability for group processes and outcomes. The resulting theoretical model integrates input-process-output models with situational contingency models to explain leadership effectiveness in a TMT context.

SITUATION-SPECIFIC ASYMMETRIES

Psychological research on small groups can inform our understanding of TMT processes. Like many decision-making groups (Hollenbeck, et al., 1995; 1998), TMTs are hierarchical and have distributed expertise. For example, product development teams often have strong leaders and distributed expertise (Clark & Wheelwright, 1992; Lewis, Welsh, Dehler & Green, 2002). At the

same time, scholars recognize the unique nature of TMTs and pay special attention to attributes that distinguish them from other work groups lower in the organizational hierarchy (Hambrick, 1994; Nadler, 1998). We thus start by highlighting salient characteristics of TMTs to build a foundation for developing theoretical propositions to explain process failures in these groups.

Unstructured Task Streams

Many scholars have observed that senior teams perform tasks that are more complex and unstructured than the activities carried out by most other organizational work teams, including other hierarchical distributed expertise (HDE) teams (Ancona & Nadler, 1989; Hambrick, 1994; Nadler, 1998). Senior teams must comprehend and interpret a great deal of vague, ambiguous and often conflicting information from many different sources (Hambrick, 1994). They manage diverse external constituents, from the Board of Directors, to shareholders, analysts, government officials, and potential alliance partners (Ancona & Nadler, 1989; Hambrick, 1994; Nadler, 1998). Furthermore, TMTs must decide which (of many possible options) are the most critical tasks to perform, unlike work groups that generally are assigned to carry out specific tasks. In sum, these teams face ambiguous and ill-structured problems (Ancona & Nadler, 1989; Hambrick, 1994).

We identify an additional dimension of task complexity. Senior teams perform a wider variety of "tasks" than other teams—thereby coping with greater task variability. Most organizational teams, including most self-managed and HDE teams, tend to undertake relatively structured, unitary tasks that exhibit some degree of consistency over time (Hackman, 1987; 1990; Hollenbeck, et al., 1995; 1998). In contrast, senior teams face *unstructured task streams*—a continual flow of varying and overlapping situations. In these streams, some situations may be familiar and routine, while others demand substantial investments in problem definition and creation of new knowledge. For consistency, we use the term "situation" to refer to the task, issue or decision confronting a TMT at a given time.

Dynamic Distributions of Information and Interests

The dynamic nature of this unstructured task stream implies that the *team-situation relationship*—or the match between the team's stable characteristics and the situation at hand—will vary across time. We identify two core dimensions of the team-situation relationship. First, the distribution of relevant information within the team is likely to differ across situations, depending on the relationship of a given issue to members' current activities and functional expertise. *Situation-specific information* consists of facts, data, and ideas that are pertinent to a particular decision. Second, TMT members, as representatives of powerful constituencies within the organization, may have closely aligned interests on some situations and divergent interests on others. *Situation-specific interests* comprise goals and objectives that individual team members wish to achieve, sometimes at the expense of other team members. The nature and distribution of interests within the TMT often differ from one situation to another.

Distributions of information and interests are a central focus of negotiation research (Lax & Sebenius, 1986; Raiffa, 1982; Watkins, 2000). This literature is particularly relevant for TMTs because decision-making in these groups often resembles multi-party, mixed-motive negotiations rather than collaborative problem-solving processes (Allison, 1971; Bazerman, 1998; Cyert & March, 1963; Murray, 1978). Negotiation scholars contend that assessing how information and interests are distributed among parties is critical to understanding multi-party negotiation processes (Lax & Sebenius, 1986; Raiffa, 1982; Watkins, 2000). In some situations, participants enter a negotiation with common information about each person's best alternative to a negotiated agreement or "BATNA" (Fisher & Ury, 1991); hence each knows others' walk-away points. Scholars describe this distribution of information as *symmetric*. In other situations, each negotiator knows her own BATNA but is uncertain of others'—an *asymmetric* distribution (Raiffa, 1982). The interests of parties in a negotiation can likewise be characterized. Individuals may have substantially

aligned (symmetric) interests, or they may have substantially opposing (asymmetric) interests (Lax

& Sebenius, 1986; Raiffa, 1982; Walton & McKersie 1965; Watkins, 2000).

The state of a TMT relative to a specific situation also can be characterized along these

dimensions. Each member of a TMT may have the same situation-specific information, or they

may have access to private or unique information not possessed by others. We define TMT

information asymmetry as the degree to which different team members have distinct, unshared

information about a particular situation. For example, facing a decision about a merger, team

members are likely to have different information about the strategy, organization, and finances of

potential partners. In many cases, the relevant information may be so taken for granted by

individual team members that they are unaware of others' lack of knowledge or understanding

(Argyris, 1993; Larson, Foster-Fishman, & Keys, 1994).

Similarly, interests of team members may be strongly aligned, or highly divergent. We

define TMT *interest asymmetry* as the degree to which team members have divergent interests in a

given situation. For example, facing a decision to downsize the workforce, team members may

wish to preserve their own power and resources and therefore try to minimize layoffs in their

respective areas. In such "mixed motive" situations, team members may both cooperate to

accomplish joint objectives and compete to advance individual interests (Bazerman, 1998; Lax &

Sebenius 1986; Walton & McKersie 1965).

These asymmetries are more dynamic and situation-dependent than demographic variables

in teams (such as tenure heterogeneity), which tend to be relatively stable over time. The same

team may have a symmetrical distribution of information and/or interests for one situation and an

asymmetrical distribution for another. For instance, member interests may be closely aligned in a

decision about fending off an unsolicited takeover bid, while interests may be quite divergent

when executives gather to determine the annual budget at a time when resources are very limited.

This suggests that models that rely on stable compositional variables may miss an important source of variance in team effectiveness, as depicted in Figure 1.

Insert Figure 1 about here

DIAGNOSING PROCESS LOSSES

Asymmetries in the distribution of situation-specific information and interests can give rise to process losses that undermine team effectiveness. Two streams of small group research can provide insight into process losses in TMTs. The first research stream views groups through a computational lens, focusing on how team inputs (information that individual members possess) are transformed into outputs (group decisions). Decision outcomes are influenced by the information distributed throughout the group and by the efficiency with which the group surfaces and uses its distributed information (Hollenbeck, et al, 1998; Stasser, 1999; Stasser & Davis, 1981). Research in the second tradition stems from the psychology of social influence processes (e.g., Asch, 1951; Baron, Vandello, & Brunsman, 1996; Hovland & Weiss, 1951; Janis & Mann, 1977; Zimbardo & Leippe, 1991). Its more socio-emotional lens views group outcomes as the result of influence processes, such as dominance patterns in a group discussion (Bales, 1954), suppression of dissent (Janis, 1982), and influences of minority views (Nemeth & Wachtler, 1974; Nemeth, 1997). Both streams document process failures, with the former focused on poor use of information and the latter on why groups fail to consider others' views.

We use both conceptual lenses to analyze implications of distributions of information and interests in TMTs for group process and performance. We argue that TMT effectiveness in a given situation is likely to be negatively affected by information and interest asymmetry, and that power centralization and psychological safety, two relatively stable attributes of TMTs, moderate the relationships between dynamic situation-specific asymmetries and TMT effectiveness.

Information Asymmetry

One purpose for engaging in a team decision process is to pool expertise from multiple sources and thereby generate ideas that no individual could develop alone. In this way, leaders may anticipate capturing synergistic benefits from teamwork. Such benefits often remain elusive, however. Asymmetrical information in groups is associated with a notable failure to discuss all relevant information (e.g., Stasser, 1999). Experimental studies have demonstrated that group discussion tends to focus on common information held by all members, such that information privately held by various members fails to surface (Larson, et al., 1996; Stasser, 1999; Stasser & Titus, 1985). Note that this phenomenon is not dependent on interests being asymmetric. Private information may remain unshared when individuals—deeply engaged in the discussion at hand— fail to recognize its salience for the issue under consideration. Members also may fail to share private information because they take it for granted and implicitly assume that others know what they know, or because they are reluctant to jump into an already active discussion.

Failure to share situation-relevant information is likely to decrease team effectiveness. By not discussing all pertinent information, teams may overlook plausible options, fail to examine the full consequences of each alternative, or underestimate the risks associated with a proposal. In addition, members' awareness that relevant information did not surface is likely to erode commitment to implementing the group's decision, especially if they feel they did not contribute fully to it.

Proposition 1: Situation-specific information asymmetry will reduce TMT effectiveness.

This problem is likely to be particularly acute in TMTs characterized by power centralization. We define power as the capability of an actor to influence others' behavior and to get people to do what they otherwise would choose not to do (Finkelstein, 1992; Kanter, 1979; Pfeffer, 1981, 1992). Scholars have argued that power plays a more central role in strategic

decision-making within top teams than in the tasks performed by other work groups (Child, 1972; Finkelstein, 1992; Finkelstein & Hambrick, 1994; Mintzberg, 1983; Tushman, 1977). TMTs must make strategic choices when cause and effect relationships are unclear and when members' goals are ambiguous and conflicting, while lower level groups tend to work on problems characterized by goal agreement and a more complete understanding of cause-effect relationships (Child, 1972; Tushman, 1977), in contexts that are conducive to sharing power and leadership (Avolio, Jung, Murry, & Sivasubramaniam, 1996; Seers, 1996).

Power centralization in a TMT is likely to influence the sharing of private information. Researchers have shown that some TMTs consist of individuals with roughly equal power, such that the CEO does not maintain a substantial advantage over other members; in others, the CEO has a great deal more power than the rest of the team (Eisenhardt & Bourgeois, 1988; Finkelstein, 1988; Finkelstein, 1992). We hypothesize that greater centralization of power – that is, when the CEO has a great deal more power than other members – will exacerbate the problem of failure to surface private information.

Group members with less power often defer to those with more power (Bales, 1988; Maier, 1961; Pfeffer, 1992; Russo & Schoemaker, 2002), in part because powerful group members can reject or marginalize those holding minority views (Nemeth, 1997; Nemeth & Wachtler, 1974; Schachter, 1951). Less powerful members may engage in self-censorship with respect to dissenting views (Janis, 1982), and more powerful members may withhold private information to protect and increase their power (Pettigrew, 1973). More specifically, Eisenhardt and Bourgeois (1988) found that TMTs with a high degree of power centralization engaged in less candid discussion and less open exchange of ideas than teams with more balanced power distributions. When power was centralized, team members often worked behind-the-scenes to influence the final outcome, withholding critical data or distributing it selectively to others in their lobbying

efforts (Eisenhardt and Bourgeois, 1988). We thus predict that power centralization in a TMT is a moderator of the relationship between information asymmetry and effectiveness.

Proposition 2: High power centralization increases the negative effect of information asymmetry on TMT effectiveness.

Next we suggest that the level of psychological safety in a senior team will affect the relationship between information asymmetry and team effectiveness. Team psychological safety is defined as the shared belief that the team is safe for interpersonal risk-taking (Edmondson, 1999). In teams with high psychological safety, a function of interpersonal trust and mutual respect, members believe that the group will not rebuke, marginalize, or penalize them for speaking up or for challenging prevailing opinion.

Psychological safety is salient (and often low) in TMTs for several reasons. First, the CEO has the ability to hire, fire, and set compensation for the other team members. This can make it difficult for other senior executives to take interpersonal risks, because they fear the consequences of missteps as evocatively depicted in one qualitative study (Edmondson, 2002). Second, conflicts and disputes within senior teams often become public knowledge. This external visibility creates an added pressure that may affect the climate within a TMT. Moreover, TMT members can find themselves competing with one another in a highly politicized and public contest for CEO succession. The stakes are high, not simply because the winner becomes the chief executive, but also because the losers typically must search for new employment. The nature of these high stakes succession contests can make it difficult to develop a safe environment for open discussion.

Power centralization and psychological safety are not uncorrelated. Teams with greater power centralization are less likely to perceive the environment as safe for interpersonal risk. However, teams can exhibit high psychological safety despite substantial differences in power among members (Edmondson, 2002; Edmondson, Bohmer and Pisano, 2000, 2001), or low

psychological safety with relatively balanced power structures (Edmondson, 1999; 2002).

In teams characterized by a low level of psychological safety, individuals may feel uncomfortable revealing uniquely held information. They may become preoccupied with concerns about the risk of sharing information and particularly reticent to provide information that does not confirm existing views within the group. In contrast, individuals are more likely to share private information if psychological safety is high. Thus, we propose that psychological safety will moderate the relationship between information asymmetry and team effectiveness as follows

Proposition 3: High psychological safety decreases the negative effect of information asymmetry on TMT effectiveness.

Interest Asymmetry

TMTs may experience process losses when discussing issues for which members have divergent interests. Although senior executives strive to achieve common goals for the firm, they also represent powerful sub-units or constituencies within the organization. This creates "a tension regarding group identities" and enhances the likelihood of goal conflict and self-interested behavior in some, but not all, situations (Hambrick, 1994: 176). For instance, members can find themselves in direct competition regarding the allocation of resources (Bower, 1970). Members of lower level work groups do not represent such large constituencies and do not have as many organizational resources under their command and are therefore less likely to experience identity tension (Hambrick, 1994). As noted above, such tensions may be exacerbated by succession scenarios, in which members jockey for advantage in the battle to become CEO.

The negotiation literature distinguishes between "value creating" and "value claiming" behaviors that arise when interests are not aligned completely (Lax & Sebenius, 1986). Value creating behavior consists of finding ways to advance compatible interests or to devise mutually beneficial trades that benefit the organization as a whole. However, when interests are not

completely aligned, individuals are motivated to capture or "claim" as much value as they can (Lax & Sebenius, 1986). In these situations, competitive value claiming behavior often takes place at the expense of cooperative value-creating behavior.

We argue that when interests within a top team differ, value-claiming behavior is likely to decrease the generation of creative new options, as executives become ardent, even over-committed, advocates for their positions. Advocates' self-serving behavior can undermine efforts to advance shared goals, preclude the kind of thorough analysis needed to arrive at the best solution for the company as a whole, and lead to erosion of team relationships. For a vivid example of this phenomenon, consider the demise of investment banking firm, Lehman Brothers, in the aftermath of value-claiming behavior by senior executives with divergent interests (Bazerman, 1998; Lax & Sebenius, 1986; Mannix, 1989). In the 1980s, the firm's two business units became embroiled in a dispute over the distribution of profits; each unit advocated a strategy that satisfied its own interests, leading to the departure of the firm's respected chairman and to financial distress (Bazerman, 1998; Lax & Sebenius, 1986). Note that this phenomenon is not dependent on an asymmetric distribution of information. Differences in interests can lead to self-serving behavior, even when people know what others know (Bazerman & Neale, 1992).

Excessive value-claiming behavior is likely to undermine TMT effectiveness by inhibiting the potential for mutual gains, thereby leading to sub-optimal solutions for the organization. When value claiming occurs at the expense of value creation, teams are also likely to lack commitment to implementing resulting decisions and may be less motivated to work together in the future. Because individuals perceive themselves as "winners" or "losers" in these kinds of situations, the losers lack commitment to the final solution. Finally, interpersonal, or affective, conflict often emerges as a result of value-claiming behavior, also eroding commitment and group harmony (Amason, 1996; Jehn, 1995).

Proposition 4: Situation-specific interest asymmetry reduces TMT effectiveness.

Power centralization exacerbates value-claiming behavior in mixed-motive situations. Negotiation research has shown that dyads with different interests and unequal power balances tend to arrive at inferior outcomes relative to those with equal power balances (e.g. Mannix & Neale, 1993; McAlister, Bazerman, & Fader, 1986; McClintock, Messick, Kuhlman, & Campos, 1973). Similarly, scholars have demonstrated that multi-party negotiations among people with equal power tend to result in more value creation than negotiations among parties with different levels of power (Mannix, 1993).

Power centralization causes value claiming to drive out value creating for several reasons. First, the CEO may believe that he can impose his preferred outcome quickly and forcefully. In so doing, he may suppress creative problem solving that could lead to a better solution. Second, less powerful members may focus primarily on protecting their own interests in these situations, because they fear that others will try to claim extra value through the behind-the-scenes lobbying that often occurs within TMTs that have highly centralized power (Eisenhardt and Bourgeois, 1988). Third, given these concerns, less powerful members may be less willing to cooperate with others to discover mutually beneficial alternatives, approaching the discussion competitively instead of cooperatively (Mannix & Neale, 1993). Thus, we propose that power centralization will moderate the relationship between interest asymmetry and TMT effectiveness.

Proposition 5: High power centralization increases the negative effect of interest asymmetry on TMT effectiveness.

High psychological safety, in contrast, may enhance value creation in mixed-motive situations. To identify opportunities for mutual gains or creative new alternatives (Fisher & Ury, 1991), team members must be willing to come forward with novel proposals and to be open about their own interests and objectives, as well as to engage in a candid discussion of each proposal's

costs and benefits for all of the parties involved in the decision process. Frank dialogue requires a climate in which people have few concerns about being embarrassed or punished for offering novel suggestions; otherwise, they are likely to focus on defending their own interests rather than on identifying opportunities for mutual gains. Thus, psychological safety should moderate the relationship between interest asymmetry and team effectiveness as follows.

Proposition 6: High psychological safety within the senior team decreases the negative effect of interest asymmetry on TMT effectiveness.

The Interaction between Interest Asymmetry and Information Asymmetry

When interests and information asymmetries occur simultaneously, the likelihood of team effectiveness decreases further. In these instances, individuals may withhold unique information because they wish to utilize it to create a personal advantage during bargaining with other group members, or because full disclosure may harm their negotiating position. An individual may hold back information that would enable others to determine his or her goals or preferences, referred to as the "strategic" use of private information (Bazerman, 1998; Lax & Sebenius 1986). Thus, we argue that these two variables interact to exacerbate process losses created by each asymmetry individually. Interest asymmetries mean that team members are motivated to withhold certain information strategically, while information asymmetries make it more difficult for people with different interests to recognize creative opportunities to realize mutual gains, increasing the likelihood of flawed and incomplete debate.

Proposition 7: Situation-specific interest and information asymmetry interact to decrease TMT effectiveness.

Summary

The above analysis identifies specific process losses that are likely to reduce TMT effectiveness. Situation-specific asymmetries in information and interests are proposed as causes of process losses, and hence decision-making failures. In contrast, for situations in which a TMT has

substantial symmetry of information and interests, we speculate that group process losses will be small. Because power centralization and concerns about psychological safety can be particularly acute in TMTs, we also addressed the potential moderating effects of these variables. We thus relate reasonably stable attributes of top teams to dynamic factors (situation-specific team asymmetries) to explain TMT effectiveness.

The next section explores leadership process choices that may mitigate effects of information and interest asymmetries. First, we note that, the team leader, as CEO, has the positional authority to manage team process in specific ways. Just as scholars of negotiation argue that bargaining strategies should be contingent upon the distribution of information and interests (Fisher & Ury, 1991; Lax & Sebenius, 1986; Raiffa, 1982; Watkins, 2000), we suggest that leaders can design and lead TMT decision-making processes contingent upon situational assessments of the distribution of information and interests. We thus develop a prescriptive contingency model (e.g., Elangovan, 1995; Vroom & Yetton, 1973) for leading TMTs.

A PRESCRIPTIVE MODEL OF CONTINGENT PROCESS CHOICE

Drawing from both normative decision theory and negotiation theory, we propose a prescriptive model for TMT decision-making to minimize the process losses described above. The purpose of the model is to articulate leadership strategies for realizing the promise of heterogeneity. By managing process in a contingent manner, we argue that senior teams can increase their potential for integrating a mix of perspectives to produce better outcomes than individual leaders could produce alone.

We do not simply provide prescriptions for reducing or eliminating information and interest asymmetries for two reasons. First, leaders want people to bring different knowledge, expertise, and interests to the team deliberations; amidst this heterogeneity lies the promise of group process gains. Second, these asymmetries are dynamic (situation-specific); a solution to

align interests in one situation may not solve the problem in another.

The model includes three process choices, each addressing one of the failures described above. By articulating three distinct process choices for leaders, we depart from prior decision-making research that treats level of subordinates' contribution as the single process choice (e.g., Hollenbeck, et al., 1998; Tannebaum & Schmidt, 1958; Vroom & Yetton, 1973). Much of the leadership and team literature implicitly frames the decision-making task as the job of the leader, with or without others' input, and with varying degrees of weight assigned to others' input. For example, researchers studying decision-making in HDE teams focus on how much weight a team leader places on other members' input when making a decision (Hollenbeck, et al, 1998). Similarly, normative decision theory (Vroom & Yago, 1988; Vroom & Yetton, 1973) postulates that leaders traverse a single spectrum from less to more participative modes of decision-making.

We draw instead on Nadler's (1996) view of executive team leadership and Elangovan's (1995) model of managerial dispute resolution. This work suggests that leaders can be more or less directive about different aspects of a situation. Nadler (1996) argued for a distinction between being directive about *content* (what decision is made) and being directive about *process* (how the decision is made). Similarly, Elangovan (1995) distinguished between outcome control and process control—both exercised by a third party engaged in dispute resolution. Building on this work, we articulate three process choices that a TMT leader faces: (1) how to reach closure on a decision (*outcome control*), (2) how to facilitate group discussion (a relatively unobtrusive form of *process control*), and (3) how to structure debate (a heavy-handed form of process control, which we call *process design*). Outcome control provides a way to reduce the chances of process losses caused by interest asymmetry; process control mitigates information asymmetry, and process design reduces problems caused by the interaction effect of both asymmetries.

Outcome Control

When trying to reach closure in a decision making process, the TMT leader faces a choice about whether to exercise more or less control over the outcome. Exercising high outcome control as a leader involves asking one's team to generate and discuss alternatives and then making the final decision alone; low outcome control means inviting the team to reach a consensus decision. High outcome control means that the leader acts as an arbitrator, listening to competing arguments and selecting the course of action that they feel is best for the organization. In the low outcome control case, the leader acts as a mediator, trying to bring team members with different views together to arrive at a mutually acceptable solution (Lax & Sebenius, 1986).

We propose that low outcome control works best when a team has symmetric interests. Low outcome control encourages creative problem solving, in part by communicating an implicit message that everyone's views matter. Conversely, if a team has symmetrical interests but knows the leader will make the decision alone anyway, motivation to participate in the team discussion may be diminished, potentially eroding the quality of the outcome. Further, if people have not contributed to a decision, they may lack commitment to its implementation (Kim & Mauborgne, 1997; Korsgaard, et al., 1995; Shapiro, 1993; Spreitzer, 1995). Finally, participating in a decision leads members' to view the process as fair, increasing commitment (Shapiro, 1993). Thus, when interests are symmetrical and problem solving is unlikely to be impeded by value claiming, leaders can reach closure through consensus building without excess risk of group process losses.

In contrast, when substantial interest asymmetry exists for a given situation, the leader can mitigate the harmful effects of value-claiming behavior through greater outcome control. Knowing that team members may push for decisions that meet their own interests at the expense of organization-wide interests, the leader can communicate that he or she will make a final decision. Through outcome control, the leader thereby diminishes the likelihood that a struggle to

reach consensus will result in a compromise that is not best for the firm. The leader also prevents group members from engaging in a competitive battle that results in one subset of the TMT imposing its will on others. Through outcome control, the leader also can preclude problem avoidance (Elangovan, 1995; 1998).

Self-serving behaviors in a team have been shown to promote affective conflict (Amason, 1996; Jehn, 1995; Roberto, 2000) and reduce commitment to implementation (Amason, 1996; Garvin & Roberto, 2001). Outcome control allows the leader to "call the question," bringing deliberations to a close before affective conflict builds up. Team members are likely to view the leader making the decision as more fair and appropriate than a process characterized by self-serving or political behavior on the part of group members in a difficult consensus building session. Dispute resolution research shows that an orderly process among parties with conflicting interests enhances perceptions of fairness and commitment (Folger & Konovsky, 1989; Karambayya & Brett, 1989). Thus, by formulating a decision outcome after hearing others' views, the leader can promote the decision quality and implementation commitment integral to team effectiveness. In sum, leader process control is likely to moderate the negative effect of situation specific interest asymmetry on team effectiveness.

Proposition 8. Outcome control by the leader reduces the negative effect of situation-specific interest asymmetry on TMT effectiveness.

Process Control

High process control means that the leader intervenes in the discussion to encourage certain people to share information before or more often than others, inquires into the views of silent members, and emphasizes particular remarks made by members. This may include managing participation ("air time"), asking people where they stand on particular issues, or encouraging alternative views. High process control also entails reiterating or paraphrasing points

that surfaced quickly but failed to receive sufficient attention (Larson, et al., 1996; 1998), as well as questioning and testing for understanding (Nadler, 1998). These leadership behaviors constitute a more directive approach to facilitating group process (Nadler, 1998; Schwartz, 1994; Webne-Behrman, 1998) relative to low process control which involves encouraging a discussion in which members participate as they wish, refraining from calling on particular individuals and not emphasizing or paraphrasing others' comments. When leaders choose low process control, they allow people to speak freely, rather than choosing to steer the discussion and select who participates at what time. This distinction draws from two streams of work: research on groups as information systems (Larson et al, 1998) and models of process consultation (Schwartz, 1994; Webne-Behrman, 1998), which provide helpful detail about how to facilitate group discussion for effectiveness.

We propose that the distribution of information in a team should determine the leaders' degree of process control. For symmetric distribution of information, high process control by the team leader is unnecessary and may be even be counterproductive. First, it may create discomfort for those who do not like to speak without having thought through their comments carefully. Second, it may create a perception that the leader is trying to slant the discussion in a particular direction, leading a group to abandon potentially superior options they believe the leader disfavors. Indeed, research has shown that group members may show excessive deference if a leader reveals his views in the early stages of a team discussion (Levine, 1989). If the rationale for why certain people are selected to speak is unclear, leader intervention may decrease perceptions of procedural fairness. Finally, if everyone in the team has the same information at the outset, encouraging people to reveal what they know is superfluous, such that a less directive approach can be used.

When the distribution of situation-specific information in a TMT is asymmetric, the risk of private information failing to surface is high (Stasser, 1999) but can be reduced if the leader takes

an active role in encouraging people to share information. The status of leaders gives them the

ability to encourage others to reveal private information (Larson, et al., 1996; Stasser, 1999).

Moreover, laboratory studies show that groups with unshared (asymmetric) information make

better quality decisions when leaders intervene actively in the discussion to emphasize and repeat

previously unshared information (Larson, et al., 1998). Encouraging people to share private

information also builds commitment, because individuals feel they have had ample opportunity to

influence the final outcome (Shapiro, 1993; Thibaut & Walker, 1975). This contention is

supported by experimental research showing that when leaders ask clarifying questions, probe for

further explanation, and rephrase comments to insure that they have understood people correctly,

they foster higher levels of commitment (Korsgaard, et al., 1995); we add that this is particularly

relevant when information asymmetries exist. In this way, process control can moderate the

negative effect of information asymmetry on team effectiveness.

Proposition 9. High process control will reduce the negative effect of situation-specific information asymmetry on

TMT effectiveness.

Process Design

Finally, the leader faces a choice about how to design a decision-making process to ensure

healthy debate. High process design may involve dividing the team into two subgroups to develop

alternatives before coming together to debate the merits of each, a process choice called the

"Dialectical Inquiry" method (Priem, et al., 1995; Schweiger, et al., 1986). Or, a leader can assign

an individual to observe and critique alternatives being discussed—the "Devil's Advocacy"

Method (e.g., Priem, et al., 1995; Schweiger, et al., 1986). Such process designs have been

proposed as a way to insure that team members have an opportunity to develop and express their

views free from the pressures to conform to a dominant position within a larger group (Janis,

1982; Schweiger, et al., 1986).   Low process design means that the leader does not design or

structure the process, but rather allows the group to determine both the mode of dialogue among members and how to evaluate alternatives.

We suggest that TMT leaders can use process design to counteract the risk of failing to generate or evaluate alternatives that arises in situations characterized by asymmetric interests *and* information. High process design can help a TMT conduct a more thorough analysis than would happen spontaneously when facing these asymmetries. For example, creating subgroups forces the team to develop and consider different viewpoints, and provides a forum where minority views are more accepted. By asking members to explain and defend various alternatives in a structured debate, the leader enhances the likelihood that private information will be shared. In addition, the leader can minimize value-claiming behavior by dismantling natural coalitions in composing the subgroups, or by forcing powerful advocates to consider and argue for options they may not have endorsed initially. This may enhance the development of creative new options, as well as the recognition and pursuit of value-creating opportunities.

This prescription stems in part from Janis's (1982) observation that decision-making practices employed during the Cuban Missile Crisis helped Kennedy's team avoid premature convergence. Following the Bay of Pigs fiasco, the Kennedy administration developed techniques for employing subgroups and devil's advocates. Reflecting on the former decision, Kennedy and his advisers realized they had discouraged dissenting opinions, marginalized those with minority views, and thereby converged prematurely on a flawed plan of action. Janis (1982) thus advocated the use of subgroups to discuss and debate alternatives, and he suggested assigning one or more team members to play devil's advocate.

These structured decision-making procedures have been evaluated in a series of experimental studies that suggest that formal, structured decision-making procedures are superior to less structured techniques in certain situations (Priem, et al., 1995; Schweiger, et al., 1986;). For

example, Schweiger and his colleagues (1986) demonstrated that Dialectical Inquiry and Devil's

Advocacy approaches encourage higher levels of critical evaluation, generate more alternatives,

and lead to higher quality decisions than the less structured Consensus Method. In addition,

Priem, et al. (1995) demonstrated that these structured methods also promote higher levels of

team member satisfaction and commitment, because individuals feel that they have had a fair and

legitimate opportunity to express their views and disagree openly with one another. This research

does not suggest that structured techniques are uniformly superior to a consensus approach;

conflicting findings have led scholars to suggest that the effectiveness of each type of process

depends on the nature of the task (Murrell, Stewart, & Engel, 1993; Priem, et al., 1995; Priem &

Price, 1991). Consistent with this, we propose that process design moderates the negative effect of

interest and information asymmetries on TMT effectiveness.

Proposition 10. High process design reduces the negative effect on TMT effectiveness of the interaction between

situation-specific information and interest asymmetries.

Table 1 provides an overview of the process choices for each of the salient conditions we

identified above.

Insert Table 1 about here

In summary, by examining the relationship between the stable team attributes studied in

TMT demographic research and the dynamic situation characteristics studied in supervisory

leadership research, we suggest a new model of TMT effectiveness. The full model, shown in

Figure 2, has the potential to explain conflicting findings from research that only includes team-

level variables. Figure 2 summarizes our theoretical arguments by showing how both team-level

(stable) and situation-level (dynamic) variables moderate the relationship between situation-specific

(dynamic) asymmetries and team effectiveness. Thus, TMT effectiveness is likely to vary across

situations unless team process is carefully managed by the leader.

Insert Figure 2 about here

IMPLICATIONS OF THE DYNAMIC MODEL OF TMT EFFECTIVENESS

Two essential leadership functions – behavioral style and interaction with subordinates (supervisory leadership) and top executives' influence on strategic choice and firm performance (strategic leadership) – have been investigated in separate streams of research (Boal and Hooijberg, 2000). The dynamic model presented in this paper suggests a need to study these leadership functions together, and thus takes seriously the complementarity of hierarchical and collaborative forms of leadership decision-making (Barnes and Kriger, 1986). Our analysis contributes to building a cumulative field in leadership research (Hunt & Dodge, 2001) by linking the leader's process choices with TMT performance, a key aspect of strategic leadership effectiveness. That, in turn, is an important driver of organizational effectiveness (Boal and Hooijberg, 2000). Figure 3 depicts these relationships. Senior executives wrestle with strategic issues in organizations, and through effective teamwork among executives the result is thought to be better strategic decisions and enhanced firm performance (Hambrick, 1994; Nadler, 1998).

Insert Figure 3 about here

Implications for Strategic Leadership Research

First, the construct of unstructured task streams and the resulting situation-specific asymmetries that arise suggest that team-level variables can only provide a limited explanation of variation in TMT effectiveness. Static team characteristics, such as demographic composition cannot lead uniformly to better or worse performance across all situations. Our analysis suggests that the same team may perform more or less effectively in different situations, such that findings related to demographic effects may be confounded by variability in distributions of information and interests within the team.

Second, if team effectiveness depends upon process choices that leaders make in each

situation, future research should explore how situational factors affect team performance. This work may help explain contradictory findings in the TMT literature.

Third, recognition of the effect of situational factors on team outcomes does not imply that stable team characteristics are not important. Notably, we argue that psychological safety and power centralization in TMTs matter – and can moderate the relationship between situational asymmetries and team effectiveness. Further theory development may consider effects of stable TMT attributes on the likelihood that information or interest asymmetries will arise. For example, team-level variables such as incentive structures or demographic heterogeneity are likely to influence the chances of situation-specific asymmetries occurring, although they will not eliminate them completely. A compensation system that rewards team members for the performance of individual business units rather than overall corporate performance increases the chances of interest asymmetries. Team longevity or tenure may affect the chances of information asymmetry, because over time, teams can build transactive memory (Moreland, 1999) in which they are more aware of what each other knows.

Implications for Supervisory Leadership Research

The propositions in this paper contribute to a long stream of research on participative leadership (Hunt, 1991; Schweiger & Leana, 1986; Yukl, 1989). Many authors have noted the limitations of prescribing that senior executives should work as a team (e.g. Hackman, 1998; Hambrick, 1994; 1995; Katzenbach, 1998). This paper suggests a new explanation for how this prescription can lead to process losses in TMTs and identifies situations in which this is more likely to occur. We also specify process and outcome choices to help mitigate process losses.

In this way, we have disaggregated the notion of directive leadership (Tannebaum & Schmidt, 1958; Vroom & Yetton, 1973). Normative decision theory presents a single spectrum of directive vs. participative leadership; we argue instead that "directive" leadership behavior may be

found along three dimensions—outcome control, process control and process design. A highly

directive approach involves high control on all three dimensions; a non-directive approach, in

contrast, engages a team in an unstructured process, without active leader intervention in the

discussion, reaching closure through consensus. We propose that these choices are independent.

That is, a leader may choose to exert more control with regard to structuring the debate but less

control with regard to reaching closure, and so on. However, we recognize that successful

diagnosis requires a level of social intelligence that not all leaders will have (Boal & Hooijberg,

2000; Clark, Ptaki & Carver, 1996;), and successful execution of the process choices similarly

requires some behavioral complexity (Boal & Hooijberg, 2000; Hart & Quinn, 1993; Hunt, 1991).

Our normative propositions thus require revisiting a longstanding debate about whether leaders

can exhibit genuine flexibility in adjusting their styles contingent on the nature of the task (Fiedler,

1967; Hunt, 1991; Quinn, 1988; Yukl, 1989).

Past research provides preliminary evidence that leaders are indeed able to be flexible in

their process choices. Vroom and Yetton (1973) asked leaders to consider hypothetical decision

scenarios, and to indicate how they would approach the situation and found that leaders believed

they could exhibit flexibility, without confirming that they actually do vary their style across real

situations. Similarly, Frederickson and Mitchell (1984) examined hypothetical decision scenarios

with chief executives, and found evidence that organizations employ different types of decision-

making process in different situations. Polley, Hare & Stone (1988) suggest that more senior

members of small groups are able to change behavior in highly dynamic ways, depending on the

group process or issue, and Katzenbach (1998) suggests that leaders rely on teamwork at the top in

some situations but not in others. Hart and Quinn (1993) provide empirical evidence that CEOs

who employ a broad repertoire of behaviors produce higher organizational performance. Finally,

recent work in product development (Lewis et al, 2002) shows clearly that high performing project

leaders display a "flexible and complicated repertoire of activities… [and] go back and forth between styles as changes in project uncertainty occur" (p.562). Moving forward, a promising avenue for future empirical research is to examine whether TMT leaders can change their degree of process and outcome control as distributions of information and interests in the team change.

Model Boundaries and Future Directions

The model presented in this paper examines leadership choices for shaping team process after a "task" has been selected for attention. These choices necessarily take place within a larger context. Before situation-specific process choices can be made, leaders (or, in some cases, members of senior teams) must make choices about what tasks to address and who should be involved in addressing them. This means that even team composition may vary across different situations. In short, the leader is in a position to make *structural choices*, in addition to the process choices we have described. For example, the leader can decide when and with whom "to team" at the top. Although it is beyond the scope of this paper to suggest conditions for which a leader should use a team at all, future theoretical work should develop a broader model, into which the model developed in this paper fits, to specify these variables.

Unlike most work groups lower in the hierarchy, senior teams endogenously define the specific task they will pursue next and, often, the membership of the group that will pursue a given task. Membership choices affect the extent to which information and interest asymmetries arise and thus also the extent to which the team encounters associated process losses. The possibility of dynamic team composition has been largely unexplored in the TMT literature, though recent empirical research indicates that different teams may form at the top to address different types of strategic decisions (Roberto, forthcoming). Thus, further theory development and empirical research are needed to develop our understanding of how teams select and prioritize tasks, as well as how they vary the composition of the decision-making body based upon the nature of the task

at hand. Our model is offered as a starting point in building a richer concept of TMT effectiveness.

Finally, we do not intend in this paper to imply that the leader of a TMT necessarily must make one set of process choices and remain wedded to those throughout a group decision process. It is possible that leaders can continually update their assessments of the state of the team and, over time, shift their approach to managing the team process. Suppose, for example, the leader's initial diagnosis for a task is that there are significant information asymmetries. As a result the leader decides to intervene actively in the discussion to surface and legitimize privately held information. Once the leader believes that the group has surfaced all relevant information, it may make sense to shift approaches and intervene less frequently in the discussion. Clearly, some shifts are easy to make, and others are more difficult: for example, stepping back from a high outcome control may be easier than reversing a decision to exert low outcome control. Thus, research may wish to explore the effect of real-time changes in the level of directive leadership along our three dimensions.

This paper provides a starting point for further theory development and empirical research on TMT effectiveness, emphasizing situational contingencies. We do not purport to offer a complete explanation of variations in team performance. Instead, our model offers new insights and potential explanations for why senior teams often fail to fulfill expectations and why they often experience certain modes of failure. Empirical research is needed to test our descriptive propositions related to failure modes and our normative propositions related to process choices. In sum, the model described in this paper invites investigation of the "black box" of senior teams, to examine the dynamic internal processes that often have been ignored by those who study the impact of structural attributes on team process and organizational outcomes.

REFERENCES

Allison, G.T. (1971). The essence of decision: explaining the Cuban missile crisis. Boston: Little Brown.

Allmendinger, J. & Hackman, J. R. (1996). Organizations in changing environments: The case of East German Symphony Orchestras. Administrative Science Quarterly. 41(3): 337-369.

Amason, A. C. (1996). Distinguishing the effects of functional and dysfunctional conflict on strategic decision making. Academy of Management Journal. (39): 123-148.

Ancona, D. & Nadler, D. (1989). Top Hats and Executive Tales. Sloan Management Review. (31): 19-28.

Argyris, C. (1993). Knowledge for action: A guide to overcoming barriers to organizational change. San Francisco: Jossey-Bass.

Asch, (1951). Effects of group pressure upon the modification and distortion of judgments. In H. Guetzgow (Ed.) Groups, Leadership and Men. (177-190). Pittsburgh, PA: Carnegie.

Avolio, B.J., Jung, D.I., Murry, W. & Sivasubramaniam, N. (1996). Building highly developed teams: Focusing on shared leadership processes, efficacy, trust, and performance. In Advances in interdisciplinary studies of work teams, Volume 3, JAI press, pp. 173-209.

Bales, R. (1954). In Conference. Harvard Business Review. 32(2): 44-50.

Bales, R. (1988). A new overview of the SYMLOG system: Measuring and changing behavior in groups. In Polley, R., Hare, A., & Stone, P. (Eds). The SYMLOG Practitioner: Applications of small group research. New York: Praeger, 319-344.

Bantel, K. & Jackson, S. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? Strategic Management Journal. (10): 107-124.

Baron, R., Vandello, J., & Brunsman, B. (1996). The forgotten variable in conformity research: Impact of task importance on social influence. Journal of Personality and Social Psychology. 71: 915-927.

Bauman, R., Jackson, P., & Lawrence, J. (1997). From Promise to Performance, A Journey of Transformation at SmithKline Beecham. Boston: HBS Press.

Bazerman, M. (1998). Judgment in Managerial Decision Making. 4th edition. New York: John Wiley & Sons.

Bazerman, M., E. Mannix, & L. Thompson. (1988). Groups as Mixed-motive Negotiations. In E. J. Lawlor & B. Markovsky (Eds.) Advances in Group Processes: A Research Annal, Vol. 5: 195-216. Greenwich, CT: JAI Press.

Bazerman, M. & Neale, M. A. (1992). Negotiating Rationally, New York: The Free Press.

Bourgeois, L.J. and K.M. Eisenhardt. (1988). Strategic decision processes in high velocity environments: Four cases in the microcomputer industry. Management Science. 34(7): 816-835.

Bower, J.L. (1970). Managing the Resource Allocation Process. Boston: Harvard Business School Press.

Bower, J.L. (1998). Process research on strategic decisions. In V. Papadakis & P. Barwise (Eds.) Strategic Decisions. Boston: Kluwer Academic Publishers.

Child, J. (1972). Organizational structure, environment, and performance: The role of strategic choice. Sociology. (6): 1-22.

Clark, K., and Wheelwright, S. C. (1992). Organizing and leading "heavyweight" development teams. California Management Review. (34): 201-215.

Cohen, S. G. and Ledford, G. E. (1994). The effectiveness of self-managing teams: A quasi-experiment. Human Relations. 47(1): 13-43.

Cyert, R.M. & March, J.G. (1963). The behavioral theory of the firm. Cambridge, MA: Blackwell.

Dean, J.W. & Sharfman, M.P. (1996). Does decision process matter? Academy of Management Journal. (39): 368-396.

Deutsch, M. (1973). The Resolution of Conflict. New Haven, CT: Yale University Press.

Edmondson, A. (1999) Psychological safety and learning behavior in work teams. Administrative Science Quarterly (44): 350-383.

Edmondson, A. (2002) The local and variegated nature of learning in organizations. Organization Science.

Edmondson, A., Bohmer, R. and Pisano, G. (2000). Learning new technical and interpersonal routines in operating room teams: The case of minimally invasive cardiac surgery. In Mannix, B., Neale, M. and Griffith, T. (Eds.) Research on Groups and Teams: (29-51). Greenwich, CT: Jai Press, Inc.

Edmondson, A., Bohmer, R. and Pisano, G. (2001). Disrupted Routines Team learning and new technology implementation in hospitals. Administrative Science Quarterly, 46: 685-716.

Eisenhardt, K. M. (1989). Making fast strategic decisions in high-velocity environments. Academy of Management Journal. (12): 543-576.

Eisenhardt, K. M. & Bourgeois, L.J. (1988). Politics of strategic decision making in high-velocity environments: Toward a midrange theory. Academy of Management Journal. 33: 737-770.

Eisenhardt, K. M. & Schoonhoven, C. (1990). Organizational Growth: Linking Team Founding, Strategy, Environment, and Growth Among U.S. Semiconductor Ventures, 1978-88. Administrative Science Quarterly. 35(3): 504-529.

Elangovan, A. (1995). Managerial Third-Party Dispute Resolution: A Prescriptive Model of Strategy Selection. Academy of Management Review. 20(4): 800-830.

Elangovan, A. (1998). Managerial Intervention in Organizational Disputes: Testing a Prescriptive Model of Strategy Selection. International Journal of Conflict Management. 9(4): 301-335.

Fiedler, F.E. (1967). A theory of leadership effectiveness. New York: McGraw-Hill.

Field, R. (1982). "A Test of the Vroom-Yetton Normative Model of Leadership," Journal of Applied Psychology, 67, 523-532.

Finkelstein, S. (1988). Managerial orientations and organizational outcomes: The moderating roles of managerial discretion and power. Unpublished doctoral dissertation. Columbia University. New York.

Finkelstein, S. (1992). Power in top management teams: Dimensions, Measurement, and validation. Academy of Management Journal. (35): 505-538.

Finkelstein, S. & Hambrick, D.C. (1990). Top management team tenure and organizational outcomes: The moderating role of managerial discretion. Administrative Science Quarterly. (35): 484-503.

Finkelstein, S. and Hambrick, D. C. (1994). Strategic Leadership: Top Executives and Their Effects on Organizations. Minneapolis, MN: West Publishing.

Fisher, R. & Ury, R. (1991). Getting to Yes. New York: Penguin.

Folger, R. & Konovsky, M. (1989). Effects of procedural and distributive justice. In R. Lewicki, B. Sheppard, & M. Bazerman (Eds), Research on negotiation in organizations: 57-80. Greenwich, CT: JAI Press.

Frederickson, J.W. & Mitchell, T.R. (1984). Strategic decision processes: Comprehensiveness and performance in an industry with an unstable environment. Academy of Management Journal. (27): 399-423.

Garvin, D. & M. Roberto. (2001). What You Don't Know About Making Decisions. Harvard Business Review. (September), 108-116.

Goodman, P., Devadas, S. and Hughson, T. L. (1988). Groups and productivity: Analyzing the effectiveness of self-managing teams. In J. P. Campbell, R. J. Campbell and Associates (Eds.), Designing effective work groups. San Francisco: Jossey-Bass.

Goodman, P., E. Ravlin and M. Schminke. (1987). Understanding groups in organizations. Research in organizational behavior. (9): 121-173

Hackman, J. R. (1987). The design of work teams. In J. Lorsch (Ed.), Handbook of organizational behavior: 315-342. Englewood Cliffs, NJ: Prentice Hall.
Hackman, J. R. (1990). Groups that work (and those that don't). San Francisco: Jossey-Bass.

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

Hambrick, D. (1995). Fragmentation and other problems CEOs have with their top management teams. California Management Review. 37(3): 110-127.

Hambrick, D. (1998). Corporate Coherence and the Top Management Team. In D. Hambrick, D. Nadler, & M. Tushman (Eds.) Navigating Change: 123-140. Boston: HBS Press.

Hambrick, D.C., Cho, T.S., & Chen, M.J. (1996). The influence of top management team heterogeneity on firms' competitive moves. Administrative Science Quarterly. 41(4): 659-684.

Harrison, E.F. (1996). The managerial decision-making process. (4th Ed.). Boston: Houghton-Mifflin.

Hart, S. L. & Quinn, R.E. (1993). Roles executives play: CEOs, behavioral complexity and firm performance. Human Relations, 46 (5) 543.

Hayes, R., Wheelwright, S., & Clark, K. (1988). Dynamic manufacturing: Creating the learning organization. London: Free Press.

Hersey P. and Blanchard, K. (1969). Life Cycle Theory of Leadership. Training and Development Journal. 23(2): 26-34.

Hickson, D.J., Wilson, D.C., Cray, D., Mallory, G.R., & Butler, R.J. (1986). Top decision: Strategic decision making in organizations. San Francisco: Jossey-Bass.

Hollenbeck, J. R., Ilgen, D. R., LePine, J.A., Colquitt, J.A., Hedlund, J. (1998) Extending the multilevel theory of team decision making: effects of feedback and experience in hierarchical teams. Academy of Management Journal, 41(3): 269-282.

Hollenbeck, J. R., Ilgen, D. R., Sego, D., Hedlund, J., Major, D.A. and Phillips, J. (1995) The multilevel theory of team decision making: Decision performance in teams incorporating distributed expertise. Journal of Applied Psychology. (80): 292-316.

Houghton, J. (1998) Corporate Transformation and Senior Leadership. In D. Hambrick, D. Nadler, & M. Tushman (Eds.) Navigating Change: 28-37. Boston: HBS Press.

Hovland, C. & Weiss, W. (1951). The influence of source credibility on communication effectiveness. Public Opinion Quarterly. (15): 635-650.

Hunt, J.G. (1991) Leadership: A new synthesis. Sage Publications: Newbury Park, CA.

Hunt, J.G. and Dodge, G.E. (2001) Leadership déjà vu all over again. Leadership Quarterly, 11(4), 435-458.

Janis, I.L. (1982). Victims of Groupthink. (2nd Ed.) Boston: Houghton Mifflin.

Janis, I.L. (1989). Crucial decisions: leadership in policymaking and crisis management. New York: Free Press.

Janis, I.L. & Mann, L. (1977). Decision making: A psychological analysis of conflict, choice, and commitment. New York: Free Press.

Janofsky, M. (1993). "At RJR, Two Heads Will Act as One." The New York Times (March 27, 1993), p. 35, 46.

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

Kanter, R.M. (1979). Power Failure in Management Circuits. Harvard Business Review (57): 65-72.

Karambayya, R. & Brett, J. M. (1989) Managers handling disputes: Third-party roles and perceptions of fairness. Academy of Management Journal. 32(4): 687-704.

Katzenbach, J.R. (1998). Teams at the top. Boston: HBS Press.

Keck, S. & Tushman, M. (1993). Environmental and organizational context and executive team structure. Academy of Management Journal 36(6): 1314-1344.

Kim, W. C. & Mauborgne, R. (1997). Fair process: Managing in the knowledge economy. Harvard Business Review. 75(4): 65-75.

Knight, D., Pearce, C.L., Smith, K.G., Olian, J.D., Sims, H.P., Smith, K.A., & Flood, P. (1999). Top management team diversity, group process, and strategic consensus. Strategic Management Journal. (20): 445-465.

Korsgaard, M., Schweiger, D., & Sapienza, H. (1995). Building Commitment, Attachment, and Trust in Strategic Decision-Making Teams: The Role of Procedural Justice. Academy of Management Journal: 38: 60-84.

Kramer, R. (1998). Revisiting the Bay of Pigs and Vietnam Decisions 25 Years Later: How Well Has the Groupthink Hypothesis Stood the Test of Time? Organizational Behavior and Human Decision Processes, (73): 236-271.

Larson, J., Christensen, C., Abbott, A. & Franz, T. (1996). Diagnosing groups: Charting the flow of information in medical decision making teams. Journal of Personality and Social Psychology. (71): 315-330.

Larson, J., Foster-Fishman, P., & Franz, T. (1998). Leadership style and the discussion of shared and unshared information in decision-making groups. Personality and Social Psychology Bulletin. 24(5): 482-495.

Larson, J. R., Foster-Fishman, P. G. & Keys, C. B. (1994) Discussion of shared and unshared information in decision-making groups. Journal of Personality and Social Psychology. 67(3): 446-461.

Latane, B., Williams, K. and Harkins, S. (1979), "Many hands make light work: the causes and consequences of social loafing", Journal of Personality and Social Psychology, Vol. 37, pp. 822-32.

Lax, D. and J. Sebenius. (1986) The Manager as Negotiator: Bargaining for Cooperation and Competitive Gain. New York: Free Press.

Levine, J. M. (1989) Reaction to opinion deviance in small groups, in Paulus, P. B. (ed) Psychology of group influence. Hillsdale, NJ: Lawrence Erlbaum, 187-232.

Lewis, M.W. , M.A.Welsh, G.E. Dehler and S.G. Green (2002). Product development tensions: Exploring contrasting styles of product management. Academy of Management Journal 45 (3): 546-564.

Maier, N. (1961). Assets and liabilities in group problem solving: the need for an integrative function. Psychological Review. (74): 239-249.

Maier, N.R.F. & Maier, R. (1957). An experimental test of the effects of developmental vs. free discussions on the quality of group decisions. Journal of Applied Social Psychology. (41): 320-323.

Mannix, E. (1989). Coalitions in the organizational context: A social dilemmas perspective. Unpublished dissertation. University of Chicago.

Mannix, E. (1993). Coalitions in the Organizational Context: The Effects of Power Balance on Coalition Formation in Small Groups. Organizational Behavior and Human Decision Processes (55): 1-22.

Mannix, E. & Neale, M. (1993). Power Imbalance and the Pattern of Exchange in Dyadic Negotiation. Group Decision and Negotiation. (2): 119-133.

McAlister L., Bazerman, M. & Fader, P. (1986). Power and Goal Setting in Channel Negotiations. Journal of Marketing Research. (23): 238-263.

McClintock, C. Messick, D., Kuhlman,D., & Campos, F. (1973). Motivational Bases of Choice in Three-Choice Decomposed Games. Journal of Experimental Social Psychology. (9): 572-590.

Miller, C.C., Burke, L.M. & Glick, W.H. (1998). Cognitive diversity among upper-echelon executives: Implications for strategic decision processes. Strategic Management Journal. 19(1): 39-58.

Mintzberg, H. (1983). Power in and around organizations. Englewood Cliffs, NJ: Prentice-Hall.

Moreland, R. L. (1999). Transactive memory: Learning who knows what in work groups and organizations. In Thompson, L. L., Levine, J. M. et al. (Eds.). (1999). <u>Shared cognition in organizations: The management of knowledge. LEA's organization and management series</u>. (3-31). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Murmann, & Tushman, M. (1997). The effects of executive team characteristics and organizational context on organizational responsiveness to environmental shock. Working Paper, Columbia Business School.

Murray, E. (1978). Strategic choice as a negotiated outcome<u>. Management Science</u>. (24): 960-972.

Murray, A. (1989). Top management group heterogeneity and firm performance. <u>Strategic Management Journal</u>. (10): 125-141.

Murrell, A., Stewart, A., & Engel, B. (1993). Consensus versus Devil's Advocacy: The influence of decision process and task structure on strategic decision making. <u>Journal of Business Communication</u>. 30(4): 399-414.

Nadler, D.A. (1996). Managing the team at the top. <u>Strategy and Business</u>. (2): 42-51.

Nadler, D. (1998). Leading Executive Teams. In D. Nadler, J. Spencer, & Associates (Eds.) <u>Executive Teams</u>: 3-20. San Francisco: Jossey-Bass.

Nemeth. C. (1997). Managing innovation: When less is more. <u>California Management Review</u>. 40(1): 59-74.

Nemeth, C. & Wachtler, J. (1974). Creating perceptions of consistency and conformity: a necessary condition for minority influence. <u>Sociometry.</u> (37): 529-540.

Papadakis, V.M., Lioukas, S. & Chambers, D. (1998). Strategic decision-making processes: The role of management and context. <u>Strategic Management Journal</u>. (19): 115-147.

Pfeffer, J. (1981). <u>Power in organizations</u>. Marshfield, MA: Pitman.

Pfeffer, J. (1992). <u>Managing with power</u>. Boston: HBS Press.

Pettigrew, A.M. (1973). <u>The Politics of organizational decision making</u>. London: Tavistock.
Pettigrew, A.M. (1992). On studying managerial elites. <u>Strategic Management Journal</u>. (13): 163-182.

Priem, R.L, Harrison, D.A., & Muir, N.K. (1995). Structured conflict and consensus outcomes in group decision making. <u>Journal of Management</u>. (21): 691-710.

Priem, R.L. & Price, K.H. (1991). Process and outcome expectations for the dialectical inquiry, devil's advocacy and consensus techniques of strategic decision making. <u>Group and Organization Studies</u>. (16): 206-225.

Quinn, R.E. (1988). Beyond rational management: Mastering the paradoxes and competing demands of high performance. San Francisco: Jossey-Bass.

Raiffa, H. (1982) The Art and Science of Negotiation. Cambridge, MA: Harvard University Press.

Roberto, M. (2000). Strategic decision-making processes: achieving efficiency and consensus simultaneously. Unpublished doctoral dissertation. Harvard Business School.

Roberto. M. (forthcoming). The Stable Core and Dynamic Periphery in Top Management Teams. Management Decision.

Ross, J. & Staw, B. (1986). Expo 86: An escalation prototype. Administrative Science Quarterly. (31): 274-297.

Ross, J. & Staw, B. (1993). Organizational escalation and exit: Lessons from the Shoreham nuclear power plant. Academy of Management Journal. (36): 701-732.

Russo, J.E. & Schoemaker, P. (2002). Winning Decisions. New York: Currency.

Schachter, S. (1951). Deviation, rejection, and communication. Journal of Abnormal and Social Psychology. (46): 190-207.

Schwartz, R.M. (1994). The skilled facilitator: Practical wisdom for developing effective groups. San Francisco: Jossey-Bass Publishers.

Schweiger, D. M., & Leana, C. (1986). Participation in Decision-Making. In E. Locke (Ed.) Generalizing from Laboratory to Field Settings. Lexington, MA: Lexington Books.

Schweiger, D.M., Sandberg, W.R., & Ragan, J.W. (1986). Group approaches for improving strategic decision making. Academy of Management Journal. (29): 51-71.

Seers, A. (1996). Better leadership through chemistry: Toward a model of emergent shared team leadership. In Advances in interdisciplinary studies of work teams, Volume 3, JAI press, pp. 145-172.

Shapiro, D. (1993). Reconciling Theoretical Differences Among Procedural Justice Researchers by Re-evaluating What It Means To Have One's Views "Considered": Implications for Third-Party Managers. In R. Cropanzano (Ed.), Justice in the Workplace: Approaching Fairness in Human Resource Management: 231-262. Hillsdale, NJ: Erlbaum.

Smith, K. Smith, K., Olian, J., Sims, H., O'Bannon, D., & Scully, J. (1994). Top management demography and process: The role of social integration and communication. Administrative Science Quarterly. (39): 412-438.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. Academy of Management Journal. 38(5): 1442-1465.

Stasser, G. & Davis, J. J. (1981). Group decision making and social influence: A social interaction model. Psychological Review (88): 523-551.

Stasser, G. & Titus, W. (1985). Pooling of unshared information in group decision making: Biased information sampling during discussion. Journal of Personality and Social Psychology. (48): 1467-1478.

Stasser, G. (1999). The uncertain role of unshared information in collective choice. In L. Thompson, J. Levine, & D. Messick (Eds.) Shared Cognition in Organizations: 49-69. Mahwah, NJ: Lawrence Erlbaum Associates.

Steiner, I.D. (1972). Group Process and Productivity. New York: Academic Press.

Tannebaum, R. & Schmidt, W.H. (1958). How to choose a leadership pattern. Harvard Business Review. 36(2): 95-101.

Taras, D.G. (1991). Breaking the silence: Differentiating crises of agreement. Public Administration Quarterly. (4): 401-419.

Thompson, L. (2000). Making the Team. Upper Saddle River, NJ: Prentice Hall.

Thibault, J. and Walker, J. (1975). Procedural Justice: A Psychological Analysis. Hillsdale, NJ: Erlbaum.

Tichy, N. & Charan, R. (1989). Speed, Simplicity, Self-Confidence: An Interview with Jack Welch. Harvard Business Review. 67(5): 112-121.

Torrance, E. (1959). The influence of the experienced members of small groups on the behavior of the inexperienced. Journal of Social Psychology. (49): 249-257.

Tushman, M. (1977). A Political Approach to Organizations: A Review and Rationale. Academy of Management Review. 2(2): 206-216.

Vroom, V. and Jago, A. (1988). The New Leadership: Managing Participation in Organizations. Englewood Cliffs, NJ: Prentice Hall.

Vroom, V.H & Yetton, P.W. (1973). Leadership and decision making. Pittsburgh: Univ. of Pittsburgh Press.

Wageman, R. (1995). Interdependence and group effectiveness. Administrative Science Quarterly. (40): 145-180.

Wageman, R. (1997). Incentives and cooperation: The joint effects of task and reward interdependence on group performance. Journal of Organizational Behavior. 18(2): 139-159.

Wagner, W., Pfeffer, J., & O'Reilly, C. (1984). Organizational demography and turnover in top management teams. Administrative Science Quarterly. (29): 74-92.

Walton, R. and R. McKersie (1965). <u>A Behavioral Theory of Labor Negotiations</u>. New York: McGraw-Hill.

Watkins, M. (2000) "Negotiation Analysis: A Synthesis," (Harvard Business School Note #800-316.)

Webne-Behrman, H. (1998) <u>Practice of facilitation: managing group process and solving problems</u>. London: Quorum Books.

Williams, K. and O'Reilly, C. (1998). Demography and diversity in organizations: A review of 40 years of research. In B. Staw and R. Sutton (eds.) <u>Research in Organizational Behavior:</u> 77-140. Greenwich, CT: JAI Press.

Williamson, O. E. (1991) Comparative economic organization: the analysis of discrete structural alternatives, <u>Administrative Science Quarterly</u>. (36): 269-296.

Wooldridge, B. & Floyd, S.W. (1990). The strategy process, middle management involvement, and organizational performance. <u>Strategic Management Journal.</u> (11): 231-241.

Yukl, G. (1989). Managerial Leadership: A Review of Theory and Research. <u>Journal of Management</u>. 15(2): 251-289.

Zimbardo, P. & Leippe, M. (1991). <u>Psychology of Attitude Change and Social Influence</u>. 3rd Edition. Philadelphia: Temple Press.

Table 1:
Matching the potential for situation specific process failures with leader's process choice

Team-Situation Variable	Process Failure	Leader's Process Choice	Behavioral Attributes of High Level of Process Choice	Outcome of Process Choice for Team Effectiveness
Interest asymmetry	Value claiming behavior reduces the potential for group value creation or joint gains; affective conflict	Outcome control (high vs. low)	Leader decides final outcome: • imposes decision on group after deliberations are complete	Decision outcome likely to create most value for organization as a whole; affective conflict reduced
Information asymmetry	Relevant information fails to surface in group discussion – not motivated by personal gain but rather by failure to recognize salience or reluctance to jump into discussion process	Process intervention (high vs. low)	Leader intervenes actively and frequently in the discussion to • facilitate sharing of situation-specific information; • clarify others' contributions; emphasizes private information; • inquire into views of silent group members	All situation-specific information is revealed and discussed by the group in the deliberation process; team commitment to solution is enhanced
Interaction effect	Self-serving behavior can exacerbate information-surfacing failures, as people deliberately withhold information to enhance their own power, further reducing amount of relevant information shared and inhibiting potential for novelty and synergy that produce joint gains	Process design (high vs. low)	Leader imposes a structured process to ensure debate and thorough consideration of alternatives, e.g.,: • uses subgroups to develop and debate alternatives, • assigns one or more Devils' Advocates	A healthy debate between more than one alternative takes place, including comprehensive analysis of issues, improving decision quality and increasing team commitment

FIGURE 1:

Situation Variability Creates Situation-specific Asymmetries Affecting TMT Process and Effectiveness
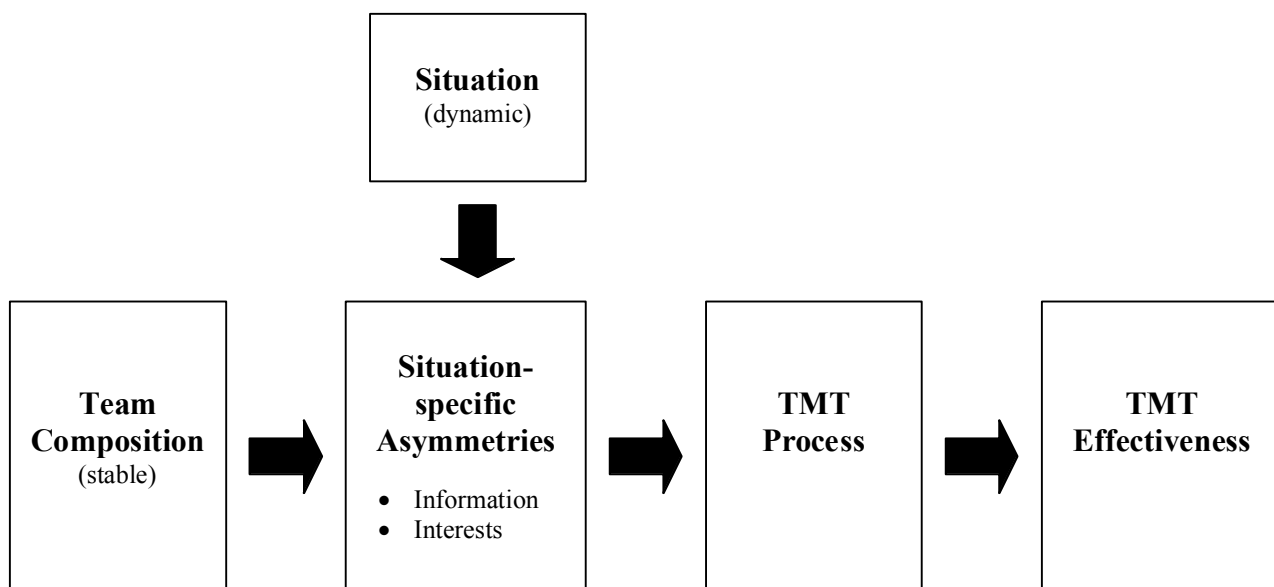
FIGURE 2:

Moderators of the Relationship between Situation-specific Asymmetries and Team Process

```
                              ┌─────────────────────────┐
                              │ Dynamic Moderators:     │
                              │ Leader Process Choices  │
              ┌───────────┐   │  • Process Intervention │
              │ Situation │   │  • Process Design       │
              │ (Dynamic) │   │  • Outcome Control      │
              └───────────┘   └─────────────────────────┘
                     │                     │
                     ▼                     ▼
┌──────────────┐  ┌──────────────────┐         ┌──────────────┐
│ TMT          │  │ Situation-Specific│  ───▶  │ TMT          │
│ Composition  │─▶│ Asymmetries      │         │ Effectiveness│
│ (Stable)     │  │                  │         │              │
└──────────────┘  └──────────────────┘         └──────────────┘
                                   ▲
                                   │
                          ┌─────────────────────┐
                          │ Stable Moderators:   │
                          │ TMT                  │
                          │ Characteristics      │
                          │                      │
                          │  • Power Structure   │
                          │  • Psychological     │
                          │    Safety            │
                          └─────────────────────┘
```
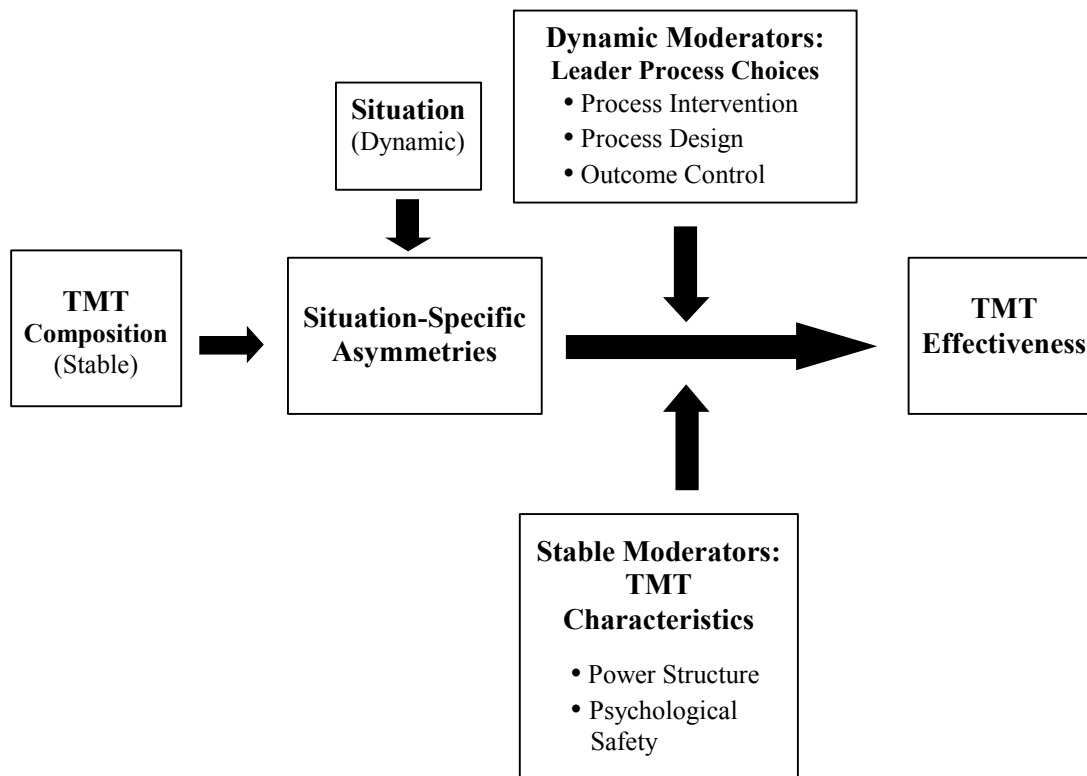
FIGURE 3:

The Relationship between Top Management Team Process and Strategic Leadership