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A dynamic model of top management team effectiveness: managing unstructured task streams

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Abstract

Leadership research relating top management team (TMT) demographics to firm performance has produced mixed empirical results. This article suggests a new explanation for these inconsistencies. We first note that a given 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 argue that, unless group process is managed accordingly, asymmetric distributions of situation-specific information and interests will reduce TMT decision-making effectiveness. We then 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, TMTs, small group process, and negotiation, and has practical implications for how leaders of senior teams can improve team effectiveness through appropriate process choices.

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1. Introduction

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

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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. Some scholars have found that many senior teams do not 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 & Floyd, 1990), or reach closure in a timely fashion (Eisenhardt, 1989; Harrison, 1996; Hickson, Wilson, Cray, Mallory, & Butler, 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 group processes effectively. Team researchers use the term "process losses" (Steiner, 1972) to describe a gap, attributable to ineffective communication or coordination, between a group's potential and actual performance. Potential performance is the level that could be achieved, from a given set of inputs, such as sufficient resources, diversity of experience, or other advantages. Well-documented process losses include pressures for conformity that lead to premature convergence on a solution (Janis, 1982; Taras, 1991), group discussion that fails to surface relevant information members possess (Stasser, 1999), and other coordination and motivation failures. Although process losses are likely to occur in TMTs—reducing decision quality and overall team effectiveness—the question of what factors might make senior teams less vulnerable to them has not been addressed in the literature.

This article develops implications of research on group interaction process for TMTs. Instead of using relatively stable team characteristics such as demographic composition to explain differences in outcomes, 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 TMT effectiveness depending on situation-specific distributions of information and interests. Reflecting Hackman (1987), we define *TMT effectiveness* as follows: (1) the degree to which the 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 the team process meets members' growth and satisfaction

needs (Hackman, 1987; Hambrick, 1994). *Situation-specific distributions* refer to the distinctive information or interests held by team members in a given situation.

In the next section, we review two streams of literature that inform our understanding of TMTs and leadership decision-making. Section 3 builds on this background to discuss implications of the task variability faced by senior teams. Section 4 develops the core of our theoretical model, which proposes that situation-specific distributions of information and interests influence TMT effectiveness, moderated by power centralization and psychological safety. In Section 5, we develop a set of process choices through which leaders can take actions that alter the effects of situational factors on team effectiveness to produce better results (see Table 1 in Section 5 for a summary). Section 6 discusses implications of these arguments for theory and practice.

2. An integrative approach

Two streams of leadership research can contribute to extending theory on TMTs. The first, strategic leadership research, employs a macro lens to study effects of TMT demographics on organizational performance, positing that team 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.

2.1. 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, Lioukas, & Chambers, 1998; Smith et al., 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 studies have found relationships between demographic variables and outcomes, the data 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 (Williams & O'Reilly, 1998). Hambrick, Cho, and Chen (1996) showed 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 experienced more turnover, and Smith et al. (1994) found 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 three 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, p. 185). Research thus has not explained how and why certain demographic attributes affect outcomes, nor provided definitive conclusions regarding the direction of causality (Bower, 1998; Hambrick, 1994; Pettigrew, 1992). Most studies assume group process as a mechanism without measuring it directly. In a rare exception, process *was* measured 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 data.

Third, most demographic studies fail to account for the impact that situation-specific factors have on team process and performance (Papadakis et al., 1998). Clearly, TMT effectiveness can vary from one situation to another (Janis, 1982; Katzenbach, 1998), yet TMT composition changes infrequently. Demographic analysis therefore necessarily 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.

2.2. *Situational leadership research*

Situation-to-situation differences are the focus of a substantial body of research on leadership behavior (Evans, 1970; Fiedler, 1967; Hersey & Blanchard, 1969; Vroom & Yetton, 1973). This work suggests that leaders need to adjust their style or approach based upon the circumstances and conditions that they encounter in their organizations and environments. Normative decision theory (Tannebaum & Schmidt, 1958; Vroom & Jago, 1988; Vroom & Yetton, 1973) focuses specifically on how leaders make decisions in conjunction with their management teams, and suggests that leaders ought to interact differently with these 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 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 TMT decision-making processes is worth pursuing. Because 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.

2.3. Summary

Upper echelons research focuses on TMT composition as the critical predictor of effectiveness. Its empirical studies rely on relatively stable and deterministic causal models that ignore the ways team processes and outcomes might vary across the multiple situations faced by senior teams. This work thus assumes a consistency of conditions and team performance that is unlikely to exist in real TMTs, and it underspecifies the role of process.

Normative decision theory, in contrast, prescribes leader choices contingent on the situation. However, this work has focused on whether or not a leader should employ a team, rather than how to employ different kinds of team processes in different situations.

This paper proposes an integrative approach, in which TMT effectiveness depends both on team composition and on how the team leader manages team process to reflect situational factors. In the next section, we thus identify critical characteristics of TMTs that vary with the situation and address implications of this variability for group processes and outcomes.

3. Situation-specific asymmetries

Psychological research on small groups can inform our understanding of TMT process. Like many decision-making groups (e.g., Hollenbeck, Ilgen, LePine, Colquitt, & Hedlund, 1998; Hollenbeck et al., 1995), TMTs are hierarchical and have distributed expertise. For example, product development teams often have strong leaders and highly diverse 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 work groups lower in the organizational hierarchy (Hambrick, 1994; Nadler, 1998). We thus highlight salient characteristics of TMTs to build a foundation for developing theoretical propositions to explain process failures in these groups.

3.1. Unstructured task streams

TMTs face ambiguous and ill-structured problems (Ancona & Nadler, 1989; Hambrick, 1994). 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 (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 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 most work groups, which are assigned to carry out specific tasks.

We identify an additional dimension of task complexity. Senior teams confront a wider variety of “tasks” (that is, situations, issues, and challenges) than other teams. The TMT task is inherently variable. In contrast, most organizational teams, including both self-managed and hierarchical distributed expertise (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). We conceptualize this task variability as follows: 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 or 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.

3.2. *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 or competing 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 thus differs from one situation to another.

Distributions of information and interests are a central focus of negotiation research (Lax & Sebenius, 1986; Raiffa, 1982; Walton & McKersie, 1965; Watkins, 2000). This work is particularly relevant for TMTs because decision-making in these groups often resembles multiparty, 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 multiparty negotiation processes (e.g., Raiffa, 1982). 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 his or her own BATNA but is uncertain of others’—an

asymmetric distribution. Likewise, individuals in a negotiation may have substantially aligned (symmetric) interests, or they may have substantially opposing (asymmetric) interests (e.g., Lax & Sebenius, 1986; Watkins, 2000).

The state of a TMT relative to a specific situation can also 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, Mannix, & Thompson, 1988; 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 thus 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 limited. This suggests that models that rely on stable compositional variables may miss an important source of variance in team effectiveness, as depicted in Fig. 1.

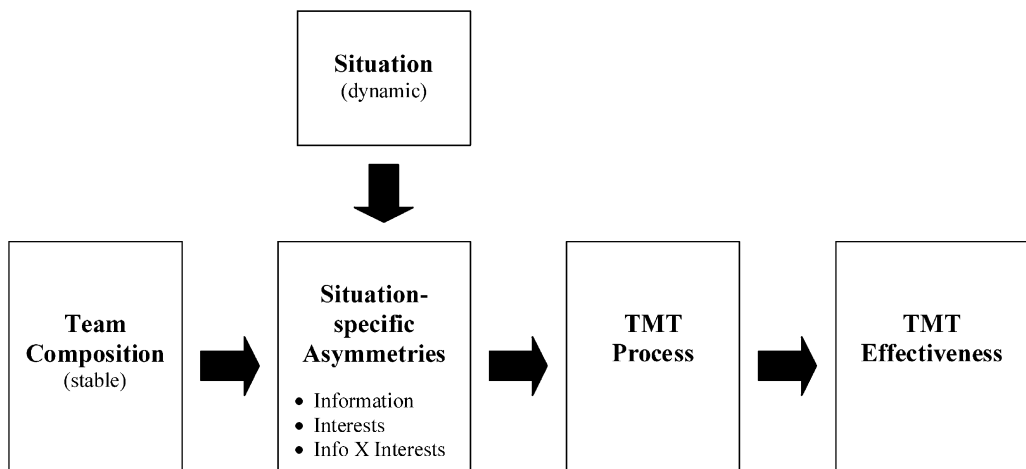


Fig. 1. Situation variability creates situation-specific asymmetries affecting TMT process and effectiveness.

4. Diagnosing process losses

We draw from research on small groups to suggest that asymmetries in the distribution of situation-specific information and interests may lead to process losses in TMTs. One research tradition views groups through a computational lens, focusing on how inputs (information that individual members possess) are transformed into outputs (group decisions). Decision outcomes are a function of both the a priori distribution of information and the efficiency with which a group surfaces and uses its distributed information (Hollenbeck et al., 1998; Stasser, 1999; Stasser & Davis, 1981). Another tradition stems from the psychology of social influence processes (e.g., Asch, 1951; Baron, Vandello, & Brunzman, 1996; Hovland & Weiss, 1951; Janis & Mann, 1977; Zimbardo & Leippe, 1991) and employs a socio-emotional lens. In this work, outcomes are a function of dominance patterns in group discussions (Bales, 1954), suppression of dissent (Janis, 1982), or whether and how minority viewpoints are considered (Nemeth, 1997; Nemeth & Wachtler, 1974). Both traditions document process failures, with the former focused on poor use of information and the latter on failure to consider the full range of ideas held by group members.

We use both conceptual lenses to analyze implications of distributions of information and interests in TMTs for group process and performance. Two relatively stable TMT attributes—power centralization and psychological safety—are explored as moderators of the relationships between dynamic situation-specific asymmetries and TMT effectiveness.

4.1. 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. First, teamwork is not automatic (Hackman, 1998). Although asymmetric information promises synergy from integrating multiple perspectives and diverse expertise, it also can interfere with team functioning (Bantel & Jackson, 1989). Compared to having the same information and experience, team members with divergent information may bring taken-for-granted assumptions and competing mental models that inhibit mutual understanding (Cannon-Bowers, Salas, & Converse, 1993; Dougherty, 1992). Seeing a situation through a lens partly shaped by the information each holds, group members may misinterpret each other's comments.

Second, unique information (known by only one member) tends not to be shared in group discussions (Stasser, 1999). Experimental studies have demonstrated that groups tend to dwell on common information (that held by all members), such that privately held information fails to surface; further, when it does surface, its impact is often muted (Larson, Christensen, Abbott, & Franz, 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.

If situation-relevant information fails to surface in a TMT decision-making process, the quality of outcomes will be reduced. 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. In contrast, if members have relatively more situation-relevant information in *common* at the outset, the group will more effortlessly consider that information (Stasser, 1999).

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 even 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 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, 1992).

We hypothesize that *power centralization*—that is, when the CEO has a great deal more power than other members—will inhibit open sharing of 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) while more powerful members withhold private information to protect and increase their power (Pettigrew, 1973). 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 worked behind-the-scenes to influence the final outcome, such as withholding critical data or distributing it selectively to others (Eisenhardt & Bourgeois, 1988). We predict that power centralization in a TMT will moderate the relationship between information asymmetry and effectiveness as follows:

Proposition 2: *Power centralization increases the negative effect of situation-specific 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 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, & Pisano, 2000, 2001), or low psychological safety with relatively balanced power structures (Edmondson, 1999, 2002). This is because powerful leaders can take actions that create psychological safety, such as acknowledging their own mistakes, actively inviting others' ideas, and communicating a genuine interest in open discussion and experimentation.

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: *Psychological safety decreases the negative effect of situation-specific information asymmetry on TMT effectiveness.*

4.2. 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 subunits 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, p. 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 overcommitted, 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 suboptimal 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, a key aspect of TMT effectiveness. Because individuals perceive themselves as “winners” or “losers” in these situations, the losers lack commitment to the final solution, necessarily eroding shared commitment. Finally, interpersonal conflict often emerges as a result of value-claiming behavior, 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, because those with more power stand to gain more than those with less, and they impede the creative processes that might have yielded greater total gains by imposing their preferences on others (e.g. Mannix & Neale, 1993; McAlister, Bazerman, & Fader, 1986; McClintock, Messick, Kuhlman, & Campos, 1973). Conversely, 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), for several reasons.

First, a powerful CEO may believe that he or she can impose a preferred outcome quickly and forcefully. Doing so 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 with highly centralized power (Eisenhardt & 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 moderates the relationship between interest asymmetry and TMT effectiveness.

Proposition 5: *Power centralization increases the negative effect of situation-specific interest asymmetry on TMT effectiveness.*

Greater 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 unorthodox 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.

Proposition 6: *Psychological safety decreases the negative effect of situation-specific interest asymmetry on TMT effectiveness.*

4.3. *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.*

4.4. Summary

The above analysis identifies specific process losses likely to reduce TMT effectiveness. Situation-specific asymmetries in information and interests are proposed as causes of process losses, and hence, ineffective decision-making. This is not to suggest that some well-functioning groups cannot capitalize on the potential benefits of asymmetry, thereby creating novel and creative solutions to problems; we simply argue that teams are more likely to encounter process losses when these asymmetries exist. Fig. 1 models the core argument developed thus far, suggesting that unstructured task streams give rise to situation-specific asymmetries of information and interests that affect TMT process and, in turn, TMT effectiveness.

Because power centralization and concerns about psychological safety can be particularly acute in TMTs, we addressed the potential moderating effects of these variables. In this way, we relate reasonably stable attributes of top teams to dynamic (situation-specific) factors 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. 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 distributions of information and interests. We thus develop a prescriptive contingency model (e.g., Elangovan, 1995; Vroom & Yetton, 1973) for leading TMTs.

5. A prescriptive model of contingent process choices

Drawing from both normative decision theory and negotiation theory, in this section 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 teamwork despite input asymmetries. 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. [Table 1](#) summarizes our process choice arguments.

Table 1
Matching the potential for situation-specific process losses 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: <ul style="list-style-type: none"> ● 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 <ul style="list-style-type: none"> ● 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., <ul style="list-style-type: none"> ● uses subgroups to develop and debate alternatives ● assigns one or more devils' advocates 	A healthy debate between more than one alternative takes place, including a comprehensive analysis of issues, improving decision quality and increasing team commitment

We do not simply provide prescriptions for reducing or eliminating information and interest asymmetries for two reasons. First, part of the rationale for teams is to bring different knowledge, expertise, and interests together; amidst this heterogeneity lies the promise of team synergy. Second, these asymmetries are dynamic (or situation-specific), such that 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 three basic 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 a 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 & Jago, 1988; Vroom & Yetton, 1973) postulates that leaders traverse a single spectrum from less to more participative modes of decision-making.

We extend this work by drawing on Nadler's (1996) view of executive team leadership and Elangovan's (1995) model of managerial dispute resolution. These models both suggest that leaders can be more or less directive about more than one aspect of a situation, independently. Nadler argued for a distinction between being directive about *content* (what decision is made) and being directive about *process* (how the decision is made). Elangovan similarly distinguished between *outcome control* and *process control*—both exercised by a third party engaged in dispute resolution.

We articulate three process choices that a leader of a TMT 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 process losses caused by interest asymmetry; process control mitigates information asymmetry, and process design reduces problems caused by the interaction effect of both asymmetries. This way of modeling the leader's decision space resembles but does not go as far as models of shared leadership, in which the leadership function is dynamically transferred from the leader to other members (Avolio et al., 1996). Compared to leaders of most work teams, CEOs have far greater positional power and legal and fiduciary accountability, making truly shared leadership difficult to achieve in these teams; however, this does not preclude CEOs from influencing team processes to generate better discussion and better results.

5.1. *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 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 suggests the leader acts as an arbitrator—listening to competing arguments and selecting the course of action that he or she believes is best for the organization. With low outcome control, 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, Schweiger, & Sapienza, 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 increased 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 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.*

5.2. Process control

We define process control as leader intervention in the discussion to encourage certain people to share information before or more often than others, to inquire into the views of silent members, or to emphasize 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 entails reiterating or paraphrasing points that surfaced quickly but failed to receive sufficient attention (Larson et al., 1996; Larson, Foster-Fishman, & Franz, 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) that provide helpful detail about how to facilitate group discussion for effectiveness.

We propose that team distribution of information should determine the leaders’ degree of process control. For a symmetric distribution, high process control by the team leader is unnecessary and may 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 selecting people 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 is intrinsically preferable.

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). Consistent with this proposition, 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; Thibault & 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: *Process control reduces the negative effect of situation-specific information asymmetry on TMT effectiveness.*

5.3. Process design

Finally, the leader faces a choice about how to design a decision-making process to ensure healthy debate. The exercise of 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, Harrison, & Muir, 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). These 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). A low level of 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. Deliberate 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 is consistent with Janis’ (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 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). Schweiger et al. (1986) demonstrated that both Dialectical Inquiry and Devil's Advocacy encouraged higher levels of critical evaluation, generated more alternatives, and led to higher quality decisions than the less structured Consensus Method. Priem et al. (1995) demonstrated that these structured methods promoted higher levels of team member satisfaction and commitment, because individuals felt that they 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 interaction effect of interest and information asymmetries on TMT effectiveness.

Proposition 10: *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.

In summary, by examining the relationship between the stable team attributes studied in TMT demographic research and the dynamic situation characteristics studied in supervisory

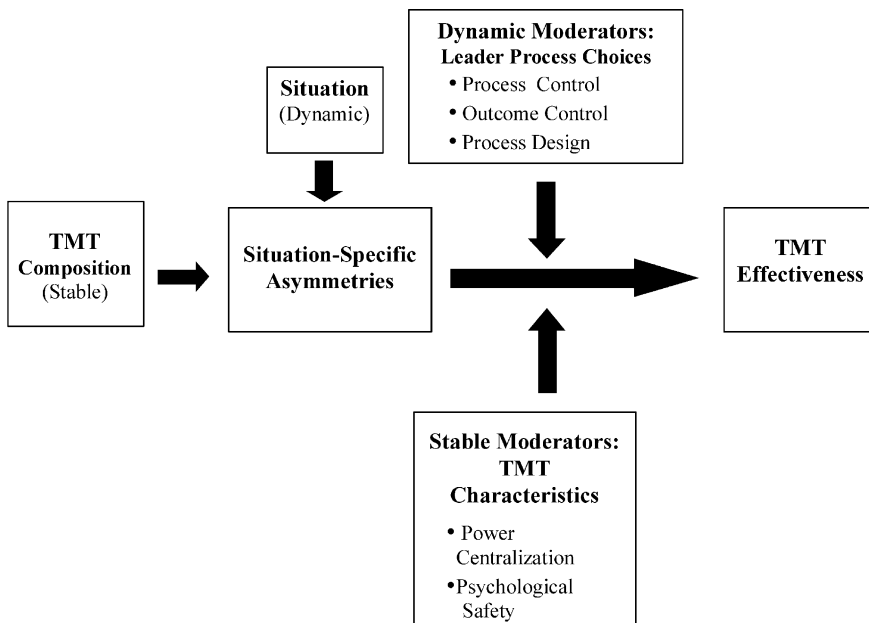


Fig. 2. Moderators of the relationship between situation-specific asymmetries and team effectiveness.

leadership research, we suggest a new model of TMT effectiveness. The full model, shown in Fig. 2, has the potential to explain conflicting findings from research that includes only team-level variables. Fig. 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.

6. 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 & 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 & Kriger, 1986).

Our analysis thus contributes to building a cumulative field in leadership research (Hunt & Dodge, 2001) by linking the leader's process choices with TMT effectiveness—a key aspect of strategic leadership effectiveness, which in turn is a key driver of organizational effectiveness (Boal & Hooijberg, 2000). Fig. 3 depicts these relationships to place our model in context. Because TMTs wrestle with strategic issues, effective teamwork can lead to better strategic decisions and firm performance (Hambrick, 1994; Nadler, 1998). Consistent with much leadership theory, our model (shown in Fig. 2) presents cross-level propositions (Waldman & Yammarino, 1999), relating individual leaders' process choices to group effectiveness and organizational outcomes.

6.1. Implications for strategic leadership research

First, the construct of unstructured task streams and the resulting situation-specific asymmetries they create suggest that group-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*



Fig. 3. TMT effectiveness as an input to strategic leadership.

different situations, such that findings related to demographic effects are likely to 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 include situational factors to explain TMT 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 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. And, 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 member knows.

6.2. *Implications for supervisory leadership research*

First, the propositions in this paper contribute to a long stream of research on participative leadership (Avolio et al., 1996; Hunt, 1991; Schweiger & Leana, 1986; Yukl, 1989). Many authors have noted the limitations of advocating executive teamwork (e.g., Hambrick, 1994, 1995; Katzenbach, 1998). This paper suggests a new explanation for TMT effectiveness and describes conditions under which process losses in TMTs are more likely, as well as strategies for minimizing them, as summarized above in Table 1. In this way, we have articulated process choices that can help achieve the ideal of shared (or distributed) leadership (Gronn, 2002; Yukl, 1999). In contrast to the notion of a single heroic leader, the construct of TMTs recognizes the potential value of shared leadership. Better process choices constitute a step toward implementing that ideal.

Second, we specify process and outcome choices to help mitigate process losses in TMTs. In so doing, we have disaggregated the notion of directive leadership (Tannebaum & Schmidt, 1958; Vroom & Yetton, 1973). Normative decision theory presents a single spectrum of directive versus 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 nondirective approach, in contrast, engages a team in an unstructured process without active leader intervention in the discussion, where closure is reached 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), 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 behaviorally flexible. Vroom and Yetton (1973) asked leaders to consider hypothetical decision scenarios and to indicate how they would approach the situation; they found that leaders believed they could exhibit flexibility without confirming that they actually do vary their style across real situations. 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, and Stone (1988) observed that senior members of small groups change behavior based on the group process or issue. Katzenbach (1998) argued that leaders rely on teamwork at the top in some situations but not in others, and Hart and Quinn (1993) provided empirical evidence that CEOs employing a broad repertoire of behaviors enhanced organizational performance. Finally, recent work in product development (Lewis et al., 2002) showed 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 the situation changes.

6.3. *Model boundaries and future directions*

This article examined 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, 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 when information and interest asymmetries arise and thus indirectly contribute to process losses. The possibility of dynamic team composition has been largely unexplored in the TMT literature, although recent empirical research indicates that different teams may form at the top to address different types of strategic decisions

(Roberto, *in press*). 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 group based upon the nature of the task at hand. This paper is thus a starting point in building a richer concept of TMT effectiveness.

Finally, we do not intend 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 situation 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 high outcome control may be easier than reversing the decision to exert low outcome control. Thus, research may wish to explore the effect of real-time changes in the level of directive leadership in process design, process control, and outcome control.

Our model ascribes the process leadership function to the CEO because the special positional power and accountability of CEOs both motivates and gives them permission to exercise process choices in TMTs. Future research, however, may explore the possibility that multiple members of the TMT can share this leadership role, such that the process design and facilitation responsibilities we have described in this paper can be distributed within a team. This work could shed light on the specific circumstances in which shared leadership of team process is more likely and more effective than process leadership by an individual team leader.

This article 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, we offer 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 both the descriptive (related to failure modes) and normative (related to process choices) propositions in this paper. In sum, the model described above invites investigation of the "black box" of senior teams, to examine the dynamic internal processes that are generally ignored in the study of effects of TMT attributes on organizational outcomes.

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