

# EXTERNAL ACTIVITIES AND TEAM EFFECTIVENESS

## Review and Theoretical Development

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*With the emergence of new organizational forms such as team-based organizations, external activities have become a critical function for organizational teams. This article offers a theoretical framework that indicates when external activities enhance team effectiveness and explains how team-design features influence external activities. Drawing on structural contingency theory, this article proposes that the relationship between external activities and team effectiveness is moderated by a set of structural contingency factors, including environmental characteristics, external interdependence, temporal fluctuations in external demands, and task complexity. The framework also identifies a set of team characteristics, including team composition, group development, and leadership, that influences the level of external activities. The present model contributes to the group literature by identifying moderators and antecedents of external activities with respect to their effects on team effectiveness. It also suggests further issues and challenges that should guide future studies of external activities of organizational teams.*

**It is almost axiomatic to mention** that a work group is part of a whole organization, comprising a subsystem embedded in a larger system. Even though the fact that external conditions constitute a key variable that shapes group processes and outcomes has been widely acknowledged (e.g., Ancona & Caldwell, 1988; McGrath, 1997), external forces have played only a peripheral role in the group literature that has been mostly focused on internal dynamics

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and performance (McGrath, 1997). However, an external perspective is critical for understanding team effectiveness because most teams can perform their tasks and maintain vitality only through their relationships with the external environment (Sundstrom, DeMeuse, & Futrell, 1990).

In contemporary organizations, external activities or boundary-spanning activities are becoming more and more important for teams. Recently emerged organizational forms, such as team-based organizations (Shonk, 1992), horizontal organizations (Byrne, 1993), virtual organizations (Galbraith, 1995), and network organizations (Powell, 1990), depend on semiautonomous, often self-managing teams as a basic operational unit (Cohen, Ledford, & Spreitzer, 1996). One of the challenges facing these new organizational forms is to achieve cooperation and coordination among teams (Smith, Carroll, & Ashford, 1995). Unfortunately, traditional coordination devices, such as rules or organizational structures (Galbraith, 1995), appear ineffective in these new organizational forms because tasks and external demands in such settings are too complex, uncertain, and interdependent to be centrally or hierarchically managed (Edmondson, 1999; Snow, Miles, & Coleman, 1992). Furthermore, today's organizational teams often need to directly interact with extraorganizational actors without organizational mediation, as in the case of a marketing team interacting with consumer groups and public media (Lacey & Gruenfeld, 1999). For this reason, teams may need to actively define their boundaries and integrate themselves with external actors both inside and outside the organization; as a result, "boundary activities become the vehicle for providing closer coupling among organizational units and between the organization and its environment" (Ancona & Caldwell, 1988, p. 487). It should be noted, however, that although a team's external activities are associated with various team performance measures (Ancona & Caldwell, 1992a; Choi & Kim, 1999; Keller, 2001; Waller, 1999), these activities often decrease the team's cohesiveness because "external communication may signal an identification with outsiders" (Keller, 2001, p. 553).

The group literature does not offer a comprehensive theoretical framework that links team design factors and environmental characteristics to a team's external activities and their impact on team effectiveness. Particularly, the antecedent conditions of a team's external activities have not been addressed in the literature (Edmondson, 1999). This article selectively reviews the group literature focusing on external activities and offers a theoretical framework of team effectiveness based on an external perspective. Particularly, I examine factors related to external activities initiated by teams instead of how team activities are contextualized by implicit or subtle external environmental cues (e.g., organizational culture, physical surroundings). Rather than conceptualizing the external factors either as contextual determinants of internal group processes or as moderating variables between internal processes and performance (Hackman, 1987), the present framework appreciates a team's active role in managing its external relations. In particular, this article attempts to indicate when external relations or "external activities" enhance team effectiveness (identifying moderators) and what team design features influence a team's external activities (identifying antecedents).

Throughout this article, the terms *team* and *group* are used interchangeably to refer to a bounded system composed of a set of interdependent individuals organized to perform specific tasks that affect others (Guzzo & Dickson, 1996). Team effectiveness, the outcome variable of most group-level theories (including the present one), is defined by the following three criteria: (a) team performance in terms of quality, quantity, or customer satisfaction with team output; (b) the team's impact on members (e.g., satisfaction, personal growth); and (c) the team's ability to perform better in the future, ensuring its long-term viability (Guzzo & Dickson, 1996; Hackman, 1987; Sundstrom et al., 1990). This article begins with definitions of internal and external activities and an opposing process model that conceptualizes the relationship between the two activities. I then present structural contingencies that moderate the effect of external activities on team effectiveness and team characteristics that predict the level of external activities. Finally, further

issues and challenges for future empirical and theoretical work are provided along with practical implications of the present analysis.

### **DYNAMICS BETWEEN INTERNAL AND EXTERNAL ACTIVITIES OF A TEAM**

Researchers have differently conceptualized the external activities of teams. Thompson's (1967) approach to interdependence offered a conceptual basis for studying relationships among teams. Building on Thompson's work, researchers have attempted to define and operationalize interdependence among teams and often measured the intensity of external activities using communication frequencies among teams (Van de Ven & Ferry, 1980). More recently, Ancona and Caldwell (1988, 1992a, 1998) have conducted inductive investigations and rendered a comprehensive list of external activities involving diverse external actors, including (a) ambassador activities, which are oriented toward top managers and the power structure to gain support and resources; (b) task-coordinator activities, which adjust the structure of work-flows involving other teams; and (c) scout activities, which garner information from the general environment.

Drawing on Ancona and Caldwell's (1988, 1992a) work, I define *external activities* as task-related activities that are directed toward the team's environment to manage its relationships with external actors, including other units within the same organization, other organizations, and the general public. This definition encompasses a broad range of team activities, including both superficial external contacts, such as environmental scanning, and intensive interactions, such as contractual negotiation or task coordination, which target diverse external actors such as other teams or departments, senior managers, and customer or supplier organizations. In contrast, *internal activities* refer to various intragroup processes occurring within the group boundary, such as forming and enforcing group norms, communication among members, the use of internal resources, and group decision-making processes.

Conceptually, it would seem that internal and external activities are clearly distinguishable, one focused on within-group dynamics and the other addressing external relations. In operational terms, however, the boundary between the two activities may often blur. For example, if a team's members have a meeting to prepare for a negotiation session with an important external stakeholder, is this an internal or external activity? As demonstrated by this example, in some cases, internal and external activities are inextricably intertwined within day-to-day team functioning. In this article, the two types of activities are differentiated by the actors who are involved in a particular event or action. External activities thus need to involve interactions with external actors (e.g., senior manager, members of other teams or other organizations). Even with this rather simple-minded criterion, the distinction between internal and external activities often can be ambiguous in contemporary organizations in which members belong to multiple teams and many tasks are conducted by temporary cross-functional teams or even sometimes by "virtual" teams. Apparently, unlike clear conceptual differences, in operational terms, internal and external activities may often overlap. Nevertheless, the distinction between the two activities seems beneficial in development of theories beyond the limitations imposed by empirical complexity and in informing researchers of new hypotheses and possibilities that guide their empirical investigations.

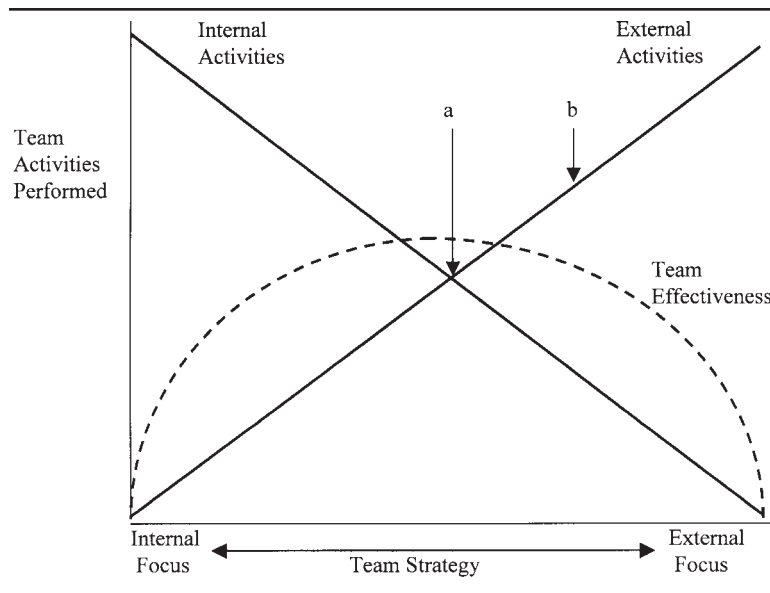
#### **COMPLEX DYNAMICS BETWEEN INTERNAL AND EXTERNAL ACTIVITIES**

Organizational teams (i.e., teams operating in organizations) cannot rely solely on either internal or external activities because no team works in a vacuum of external forces and, at the same time, no team exists without maintaining its boundary. If every team needs to conduct both internal and external activities, how are the two activities related to each other? I propose that the two activities compete against each other, each seeking more of the limited team resources. At the same time, however, internal and external activi-

ties may reinforce each other and thus maintain a synergistic relationship.

*Competing relationship between internal and external activities.* Given that a team has only limited resources (e.g., time, effort, and personnel), conducting either internal or external activities may reduce resources available for the other. This trade-off relationship forces organizational teams to allocate their resources between internal and external activities. This proposition seems plausible in the light of existing evidence showing that internally focused teams often fail to properly utilize external information (Janis, 1982). Boyd and his colleagues also argued that a top management team paying too much attention to internal operations fails to perceive changes in its environment (Boyd, Dess, & Rasheed, 1993). Apparently, internal and external activities compete against each other for limited resources within the team.

One way to theorize the competing relationship between two constructs is suggested by the opposing process model. For example, to model the process of social identity formation among individuals who need both uniqueness (individuation) and similarity to others (social inclusion), Brewer (1991) proposed an opposing process between assimilation and differentiation. Figure 1 presents an adapted version of the opposing process model in which internal activities and external activities are posited as the two opposing processes of organizational teams. The abscissa of Figure 1 depicts the continuum of a team's strategy, ranging between a pure focus on either internal or external issues. Conceptually, when a team concentrates completely on external issues, it performs external activities to the maximum at the expense of internal activities. In contrast, if a team focuses on internal issues, a greater level of internal activities is performed at the cost of limiting external activities. This trade-off between internal and external activities appears to be the critical issue of managing team boundaries, as noted by Sundstrom et al. (1990, p. 130): "The group boundary needs continual management to ensure that it becomes neither too sharply delineated nor too permeable, so that the team neither becomes isolated nor loses its identity."



**Figure 1: Opposing Process Model of Internal and External Activities**

The dotted line in Figure 1 hypothetically depicts the levels of team effectiveness. *Ceteris paribus*, team effectiveness may be higher when a team allocates its resources in such a way that it strikes a balance between internal and external activities (see point a in Figure 1) than when it pours its resources into one type of activity while neglecting the other (see point b). This basic pattern will later be extended, taking into account specific team contingencies. Nevertheless, teams that strike a good balance or shift emphasis between internal and external activities seem to be more effective in general than teams that stick to either one of the two activities (Ancona & Caldwell, 1988; Cohen & Levinthal, 1990; Gersick, 1988). In the case of groupthink, a team becomes engrossed by internal activities due to its strong group cohesiveness, isolating itself from external information (Janis, 1982). Conversely, team effectiveness may also suffer from a team's constant focus on its external environment, particularly when a team continually scans its environment for new information without settling down to a specific course of action, inviting the risk of being "underbounded" (Ancona, 1990).

*Synergistic relationship between internal and external activities.* Although internal and external activities compete for limited resources within a team, these two activities may promote each other through their subsequent impact on team functioning and outcomes. For example, successful internal coordination may effectively remove obstacles or distractions (e.g., role ambiguity, interpersonal conflict, power struggles) within the group and provide a better ground for external activities by offering the possibility of better decisions and extra resources (e.g., staff time, energy). Edmondson (1999) demonstrated that constructive internal group dynamics (in this study, *psychological safety*, indicated by interpersonal trust and mutual respect among team members) is significantly and positively associated with the level of the team's boundary-spanning activities. Conversely, high performance as a result of effective external activities may infuse feelings of pride and collective efficacy among team members that can indeed enhance the quality of internal dynamics. Through mutual reinforcement, internal and external activities may maintain a synergistic relationship.

In addition, internal and external activities can interact in a synergistic way by playing complementary roles in achieving a common goal. For instance, the fundamental group process of forming and maintaining group identity illustrates how internal and external activities can work together over time. Internal activities maintain group identity by sharpening the group boundary and enhancing group cohesiveness (Campion, Papper, & Medsker, 1996). For this reason, an extreme external focus can threaten a team's existence by dissolving the group boundary (Ancona & Caldwell, 1992a). Nevertheless, external activities may also contribute to forming group identity. In a sense, group identity is the manifestation of a group's inherent propensity to differentiate itself from its environment by establishing its own workspace, work time, task structure, operation rules, and goals (Sundstrom et al., 1990). To establish this uniqueness, a group may need to interact with external actors, just as an individual creates his/her identity through interactions with others (e.g., social comparison) (Festinger, 1954). In sum, external activities may initially define a group identity and regularly validate it based on external information, whereas internal



activities may strengthen an established group identity. In summary, once in place, internal and external activities may maintain synergistic relationships through mutual reinforcement and differentiated roles that each type of activity plays.

### **STRUCTURAL CONTINGENCIES: MODERATORS OF THE RELATIONSHIP BETWEEN EXTERNAL ACTIVITIES AND TEAM EFFECTIVENESS**

Figure 2 offers an overview of the present analyses of moderators of the relationship between external activities and team effectiveness along with antecedent team characteristics that may predict the extent to which a particular organizational team performs external activities. This framework also includes feedback loops from team effectiveness to team characteristics and structural contingencies, reflecting that team effectiveness reshapes or reconfigures a team's properties and its context over time. Teams may perform external activities in response to environmental demands they perceive. At the same time, a team's external activities may also transform the external actors and reshape the team context, leading to changes in the team's environmental configuration over time (cf. enactment) (Weick, 1979). For example, consistent and prompt service can pacify initially demanding customers, which may subsequently reduce the effort needed for the team to maintain external relations with such customers.

The first half of the framework, drawing on structural contingency theory, concerns the moderating role of a set of contingency factors with regard to the relationship between external activities and team effectiveness. Structural contingency theorists have argued that the effectiveness of an organization depends on the fit of its strategy with the structural characteristics of its environment (Thompson, 1967). For instance, when environmental demands are diversified, the organizational structure needs to be differentiated to manage the diversity in the environment (Lawrence & Lorsch, 1967). Although structural contingency theory was initially developed at the organizational level, this theory now seems applicable to teams

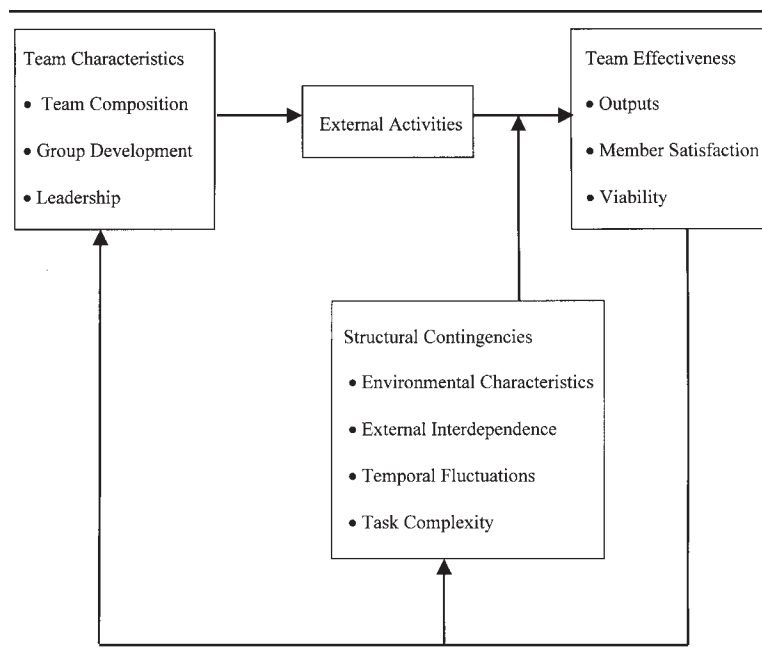


Figure 2: Integrated Framework of Team Effectiveness

because today's teams frequently operate as semi-independent units with greater autonomy than in the past (Cohen et al., 1996; Powell, 1990). The current framework identifies three external conditions and one design factor as a team's structural contingencies that prescribe an appropriate level of external activities for the team.

#### ENVIRONMENTAL CHARACTERISTICS

A team may need to perform greater external activities when it deals with many differentiated external actors who are unpredictable and demanding, as compared to a small number of stable, benign external actors (Sundstrom et al., 1990). For example, a human resource management team that deals with diverse constituents both within the organization (production team, R&D team, senior managers) and outside the organization (job applicants, headhunters, government regulations) may face more severe environmental demands than a purchasing team that deals with a single

major supplier. Under unfavorable environmental conditions, a team may need to perform more external activities to be effective and maintain continuous and reliable interactions with external actors. In this context, a team's external activities may directly contribute to its effectiveness. In contrast, if a team's environment is favorable, a focus on external activities could misdirect the team's limited resources, which could be effectively used in other ways. In this case, external activities can be unrelated to, or even negatively related to, team effectiveness.

*Proposition 1:* Environmental characteristics moderate the relationship between external activities and team effectiveness, such that when environmental diversity/uncertainty/demand is high, external activities are positively related to team effectiveness; when environmental diversity/uncertainty/demand is low, external activities are unrelated to (or negatively related to) team effectiveness.

#### EXTERNAL INTERDEPENDENCE

Although most organizational teams are interdependent with their environment in the sense that they have to receive input from and provide output to the environment, they do so to different degrees. For example, a production team needs to interact with other organizational units (e.g., sales, logistics, purchasing, packaging, distributing, quality control) more often than is the case for a maintenance team (Druskat & Kayes, 1999). A team's function often defines its structural position in the flow of information and resources, which in turn determines the team's interdependence with external actors. The overall interdependence of a team and its environment is determined by the total amount of resources (e.g., materials, funds, services, personnel, knowledge) to be transacted across the team boundary for the completion of team tasks (Druskat & Kayes, 1999). Accordingly, the importance of external activities for team effectiveness may be proportional to the degree to which a team depends on and is depended on by external actors: "Group performance will be enhanced if the amount of external activity increases as resource dependence increases" (Ancona & Caldwell, 1988, p. 486).

*Proposition 2:* External interdependence moderates the relationship between external activities and team effectiveness, such that when external interdependence is high, external activities are positively related to team effectiveness; when external interdependence is low, external activities are unrelated to (or negatively related to) team effectiveness.

#### TEMPORAL FLUCTUATION

In organizations, the environmental characteristics of a team and its external interdependence may vary over time. One source of such temporal fluctuations is irregular upsurges of environmental demands that may temporarily intensify the team's need for external integration, such as an unexpected external threat to normal team operation (Choi & Kim, 1999). During the period of bursting external demands, external activities may play a key role in team effectiveness. For example, in a simulation study of airline crews, Waller (1999) found that when irregular events are prevalent in the team's work context, external activities (information collection and transfer) were the better predictor of team performance than internal activities (task prioritization and task distribution among team members).

Another source of temporal fluctuations involves regular milestones of task performance. For example, most teams attempt to get a sense of what defines their tasks and goals at the beginning of a project so that they can evaluate their progress and the effectiveness of the chosen strategy in the middle of the project, and measure their outcomes at the end. For this reason, organizational teams typically encounter a heightened necessity for external activities at the very beginning of a project, at the midpoint of the project duration, and right before the deadline (Ancona, 1990; Gersick, 1988). Thus, teams that can adjust their levels of external activities in accordance with their project cycle may better achieve their goals than those who randomly fluctuate their external activities. Temporal shifts of environmental demands are also caused by extraneous temporal cycles or rhythms, such as annual business cycles, seasonal changes in demands, or semester cycles in universities (cf. entrainment) (Ancona & Chong, 1996). A team that prepares a company's

annual report, for example, may experience an explosion of external demands as well as a heightened need for external information or feedback at the end of the fiscal year when the report is due. These temporal events and milestones, either regular or irregular, present another determinant of effective team strategies.

*Proposition 3:* Temporal shifts of external demands and interdependence moderate the relationship between external activities and team effectiveness, such that when external demands and interdependence are temporarily high, external activities are positively related to team effectiveness; when external demands and interdependence are temporarily low, external activities are unrelated to (or negatively related to) team effectiveness.

#### **TASK COMPLEXITY**

Given that teams are organized to achieve certain goals by performing a particular set of tasks, a team's goals and tasks largely define its operating environment as well as its structural contingencies. The impact of the task content on group dynamics and decision-making processes has been highlighted by many group researchers (Druskat & Kayes, 1999). In particular, researchers have repeatedly identified the degree of routine in the task, or task complexity, as a key variable, which often offers the most theoretical leverage for group studies (Hambrick, Davison, Snell, & Snow, 1998). Low-complexity tasks (e.g., assembly work) are highly routinized and well-structured, involving predictable situations that can be effectively managed within standard operational procedures. In contrast, high-complexity tasks (e.g., software development) contain ill-defined problems that often require creativity or novel efforts from team members and thus cannot be standardized.

High task complexity may increase the need for a team to conduct external activities. Organizational teams performing low-complexity tasks do not need much interaction with external actors because their tasks can be accomplished independently, following standard operational procedures (Campion, Medsker, & Higgs, 1993). In contrast, teams performing high-complexity tasks may need to actively manage their boundaries to complete their tasks by

collecting information and coordinating their task activities with external actors (Waller, 1999). Furthermore, performance criteria of complex tasks are not clearly specified (and often defined by external actors, such as customers or senior managers) and high-complexity tasks typically do not allow for clear means-ends relationships nor offer any clear-cut recipe for actions (Edmondson, 1999; Thompson, 1967). Teams performing complex tasks, therefore, need to justify their decisions and subsequent actions to external actors and seek feedback in an effort to properly adjust their course of action in accordance with external demands.

It has been demonstrated that external activities influence various effectiveness criteria of teams performing complex tasks (Campion et al., 1996) as opposed to simple, repetitive tasks (Campion et al., 1993). Not surprisingly, most empirical data demonstrating the critical role of external activities have been based on teams performing complex tasks, such as product development teams, marketing teams, software-design teams, flight crews, and top management teams (Ancona & Caldwell, 1992a; Campion et al., 1996; Choi & Kim, 1999; Keller, 2001; Waller, 1999). Overall, complex tasks involving ill-structured problems and uncertain conditions seem to produce a stronger relationship between external activities and team effectiveness.

*Proposition 4:* Task complexity moderates the relationship between external activities and team effectiveness, such that when task complexity is high, external activities are positively related to team effectiveness; when task complexity is low, external activities are unrelated to (or negatively related to) team effectiveness.

In summary, the strength of the effect of external activities on team effectiveness is moderated by a team's task content as well as its environmental characteristics and its external interdependence, which may fluctuate over time. Just as functional correspondence between environmental demands and the organization's capacity to meet those demands improves organizational performance (Gresov & Drazin, 1997), correspondence between a team's structural contingencies (environment, task characteristics) and its external activities may promote team effectiveness.

### **TEAM CHARACTERISTICS: ANTECEDENTS OF EXTERNAL ACTIVITIES**

The second half of the present framework involves identifying antecedents of external activities and proposing testable hypotheses. Specifically, the present analysis proposes that a set of team characteristics (i.e., team composition, group development stage, leadership) influence the level of external activities performed by a particular organizational team. Of course, these team characteristics compose only a subset of numerous group variables that can be studied. Nevertheless, each of these variables is among those most studied in the group literature, and the hypotheses developed here are intended to offer insights into how internal dynamics of a team can be related to its external activities. Understanding the mechanism through which internal dynamics and external functions relate to each other should be the first step toward building a more ecologically valid team effectiveness model that incorporates both internal and external perspectives.

#### **TEAM COMPOSITION**

Group composition in terms of demographics (e.g., age, sex, race) and other member characteristics (e.g., expertise, personality) has long been identified as a key determinant of group dynamics (Arrow & McGrath, 1995). Demographically heterogeneous groups, particularly when they are diverse in visible characteristics (e.g., race), tend to engage in low-quality internal communication that is largely formal and infrequent, resulting in a lack of the group's social integration, distrust among members, and low commitment to the group (Smith, Smith, Olian, Sims, O'Bannon, & Scully, 1994; Tsui, Egan, & O'Reilly, 1992). These adverse internal processes in turn produce unfavorable outcomes, such as high turnover, member dissatisfaction, and reduced productivity (Jehn, Chadwick, & Thatcher, 1997).

Although demographic heterogeneity often impedes internal activities of a team by blocking communication among members, heterogeneous teams may have advantages in performing external

activities. A heterogeneous team is more likely to have contacts of greater number and diversity outside the group boundary (cf. weak ties) (Granovetter, 1995). Diversity in members' experience, expertise, and previous membership can promote a team's connections to external actors, an asset that is not available to homogeneous teams (Arrow & McGrath, 1995). For example, heterogeneity in members' functional specialties increases external communication of product development teams (Ancona & Caldwell, 1992b). Edmondson (1999) and Keller (2001) also reported that cross-functional teams with greater functional diversity conducted more external activities as compared to other teams composed of members with less diverse functional backgrounds. In top management teams, heterogeneity in executives' functional backgrounds, education, and company tenure enhanced the company's environmental scanning (Hambrick, Cho, & Chen, 1996). Perhaps teams with greater heterogeneity are likely to conduct more external activities because they (or at least one of their members) can speak different "languages" of different functions, understand diverse cultures, and be similar to diverse external groups.

*Proposition 5:* High heterogeneity in team composition increases a team's external activities.

#### **GROUP DEVELOPMENT**

Researchers have recognized that internal group dynamics may change over time as a group develops and matures either through stage-like processes (McGrath, 1991) or in a more chaotic manner (Gersick, 1988). As a group matures, internal communication becomes more efficient or task-oriented (Tuckman, 1965), and each member's expertise is more accessible to other members (cf. meta-knowledge) (Stasser, Stewart, & Wittenbaum, 1995). During the inceptive period, teams need to set their goals, identify tasks and strategies, and define roles and norms, all of which may cause substantial pressure and stress for the team. Facing internal disarray, a newly formed team may exhaust resources in achieving internal



integration. At the early stage of team development, thus, although a team needs to perform many external activities at the very beginning to position itself in a broad environmental context and to correctly identify customer needs (Ancona, 1990; Gersick, 1988), the team may not be able to allocate substantial resources to external activities.

In contrast, long-standing teams may fail to conduct external activities for different reasons. Well-developed and successful groups are often subject to complacency (Katz & Allen, 1982), a state that may lead to inefficient use of both internal and external resources. Mature groups that rely heavily on habitual routines—that is, well-developed, previously successful practices—are less sensitive to critical external signals and often fail to initiate necessary novel reactions (Gersick & Hackman, 1990). Assuming that teams with continuous failure are selected out, emergence of habitual routines may not be uncommon in long-standing teams. Apparently, well-developed teams often lapse into the collective psychology of illusional self-sufficiency, thus reducing external activities (Janis, 1982). This pattern may hold true even for teams dealing with a constantly changing environment. These teams may quickly become sensitive to external stimuli, sharpen their skills for environmental scanning, and develop a routine for scanning and a scheme for interpretation of external information. After a while, they feel confident in their environmental perceptions and increasingly rely on intuitive processes based on their experiences without actually collecting data from external sources. This was exactly what happened in Katz and Allen's (1982) study in which long-standing R&D teams with stable internal structure decrease external communication, particularly with important external actors.

*Proposition 6:* The group development level and the extent of external activities maintain an inverted-U relationship, such that when a team is in its inceptive period or when it is fully developed (later stage of development), it performs less external activities; when a team is moderately developed, it performs more external activities.

### LEADERSHIP STYLE

The group literature has identified leaders as those who influence core group processes (e.g., communication, decision making) and who affect each member's contribution to team performance by allocating resources and opportunities within the group (Yukl, 1994). Researchers have also long recognized the critical role of leaders in managing external relations, using terms such as "linking pin" (Likert, 1967) or "nerve center" (Mintzberg, 1973). Specifically, leaders manage the team boundary by interpreting and filtering external information and setting strategies to deal with the environment (Ancona, 1990).

Despite the consensus that leaders significantly affect the level of external activities, researchers have disagreed on the type of leadership that facilitates a team's engagement in external activities. Ancona (1990) argued that externally oriented teams are not cohesive enough to motivate members to integrate their efforts within the group, and that this problem can be solved by a directive leader who integrates various team activities and binds team members together. In contrast, the groupthink model suggests that a directive leader simply isolates the team from its environment and excludes external sources of information (Janis, 1982). Choi (1998) offered supporting evidence for the position that participative leadership is positively associated with external activities.

A potential reason for these conflicting results is the differences in the teams sampled. Ancona's (1990) sample included teams newly formed for a new task that reflected a new organizational direction. Perhaps the disorderliness of new teams engaging in new tasks under changing external contexts favors directive leaders who actively reduce uncertainty by defining the group boundaries in terms of membership, tasks, norms, and goals of the group. In contrast, the teams studied by Janis (1982) and Choi (1998) were well-developed teams that might have already developed a clear normative structure of roles and mutual expectations that offered a ground for stable internal coordination among members (Levine & Moreland, 1990). For these teams, directive interventions by leaders can often be redundant or even distracting for members. In such cases,

participative leadership that allows autonomy of members should be enough to bind the group together. In their study of well-established maintenance and production teams (team tenure longer than 4 years), Druskat and Kayes (1999) showed that leaders who guide the team without overmanaging it with excessive interventions provided members with greater autonomy, which in turn was positively related to the team's external activities. This is perhaps because "increased autonomy requires a team to assume responsibilities traditionally filled by managers" such as boundary-spanning activities (Druskat & Kayes, 1999, p. 208).

In summary, when the team is in an inceptive period with many team parameters unfixed, a directive leader who quickly establishes internal order and actively manages team boundaries may be able to generate extra resources for performing external activities. In contrast, once role and norm structure and boundaries are clearly defined, continuous intervention by a directive leader may unnecessarily distract member attention and create overdependence of members on the leader, reducing member autonomy that is conducive to the team's external activities (Druskat & Kayes, 1999).

*Proposition 7:* Group development moderates the relationship between directive leadership style and the extent of external activities, such that when the team does not have a clear structure and boundary, directive leaders increase external activities of the team; when the team has developed a clear structure and boundary, directive leaders decrease external activities of the team.

## IMPLICATIONS FOR RESEARCH

The present framework identifies several potential venues for further studies on external activities of organizational teams. It also raises intriguing empirical and conceptual questions that relate to a team's external functions. The hypotheses advanced here, however, need further qualifications because they are not universally applicable to various settings and different types of teams. Several issues and challenges to be considered in any future investigation are discussed below.

**CONCEPTUAL AND FUNCTIONAL  
MULTIPLICITY OF EXTERNAL ACTIVITIES**

In this article, for the sake of conceptual simplicity, external activities were treated as a monolithic construct. A more realistic view of this concept, however, reveals that there are numerous types or forms of external activities. For example, Ancona and Caldwell (1988) identified 15 specific external activities (e.g., gathering information and resources, scanning, feedback seeking, opening up communication channels, informing, coordinating, negotiating). Particularly, inflow and outflow of information and resources across team boundaries may have differing relationships with team characteristics, structural contingencies, and team effectiveness.

In the organizational literature, different organizational forms adopt differing external communication tactics (e.g., press agent/publicity, public information, two-way asymmetry, and two-way symmetry) depending on their goals, structure, and environmental characteristics (Sutcliffe, 2001). Likewise, organizational teams may also develop distinct patterns of external activities as a consequence of their function, structure, relationship with external actors, and location in a communication network. Moreover, various types of teams (e.g., production, maintenance, new product development, marketing, top management) deal with varied information and resources that may create unique contexts and constraints for conducting external activities. Also, differing motivation underlying external activities (e.g., gathering information, mobilizing resources, task coordination, gaining legitimacy) may lead to disparate types of external activities (Ancona & Caldwell, 1992a). All these factors contribute to conceptual and functional multiplicity of external activities in organizational teams. To examine these issues, we need empirical data from diverse types of teams operating in varied settings, beyond R&D teams that have been the typical setting of extant studies (Ancona & Caldwell, 1992a; Katz & Allen, 1982).

### TEAM PROCESS OF ENVIRONMENTAL PERCEPTION

An important but often ignored problem that awaits further research attention is the question of how organizational teams arrive at an understanding of the environment. Perceiving and interpreting environmental information to create accurate or inaccurate understandings of the environment is a key process that initiates and guides an organizational team's subsequent external activities. For instance, teams may have varying degrees of sensitivity to temporal fluctuations in external demands and interdependence and tend to be more sensitive to internal cues such as deadlines rather than external cues such as changing customer demands. Thus, teams facing the same situation may have very different perceptions of their external demands and interdependence.

The question of environmental perception, particularly by top managers or members of top management teams (TMTs), has been a core issue of strategic management. Research on TMTs has shown that short team tenure of members, high work history diversity, and low team discretion were associated with flawed and narrow environmental perception (for a review, see Sutcliffe, 2001). Unfortunately, the literature does not offer many data regarding how organizational teams other than TMTs shape their environmental perceptions. A prompt and accurate environmental perception may be more likely when the teams operate under participative leadership, self-managing arrangements, and openness/trust among members that allow pooling of members' diverse perceptions and interpretations (Druskat & Kayes, 1999; Guzzo & Dickson, 1996). Of course, this kind of speculation based on TMT research should be validated using data from varied team settings.

Identifying team conditions or contingencies that contribute to accurate environmental perception is critical for team effectiveness because teams may choose their external strategies based on their assessment of the environment (e.g., importance and strength of external demands, degree of interdependence with external constituents). Misperceptions of team environment are apt to engender erroneous team responses that fail to meet external demands. In this regard, well-established literature on group decision making, par-

ticularly studies on transactive memory systems (Liang, Moreland, & Argote, 1995) and hidden profile (Stasser et al., 1995), might offer critical insights into effective processes of pooling external perceptions and information distributed among members.

#### **MULTIPLICITY OF TASK ENVIRONMENT**

In the present model, it is posited that a team's structural contingency factors prescribe the dominant functions to be performed by the team, either internal or external. However, conflicting functional requirements may occur when each contingency poses different functional demands (Gresov & Drazin, 1997). For example, a production team may perform routine, self-contained tasks (low task complexity, low external interdependence), while the same team needs to frequently ship its output to diverse and demanding customers (high environmental uncertainty/diversity). If separating the team to perform the two distinct functions is not a plausible option, this team may need to live with conflicting functional demands. Unfortunately, most organizational teams in the contemporary business environment may need to deal with conflicting functional requirements because their structural contingencies are often multifaceted rather than uniform. This situation raises two critical research questions: (a) How do structural contingencies (environmental characteristics, external interdependence, temporal fluctuations, task complexity) combine to create overall functional demands for a team? and (b) How does a team prioritize its functions when facing conflicting environmental demands that require different functions? Answers to these complicated questions may hold a practical significance for team leaders.

#### **SUBSTITUTES FOR EXTERNAL ACTIVITIES**

One intriguing issue is that external demands can be addressed by strategies or structures other than external activities that may achieve the same functional effect (functional equifinality) (Gresov & Drazin, 1997), offering multiple structural options to the team. First, as can be observed in flight-operations teams (Weick & Rob-

erts, 1993), when a team encounters an extremely high need for continuous, reliable coordination among members, it may no longer have the resources needed for managing exigent external relations. In this case, the responsibility for the team's external integration can be taken on by a nominal leader specializing in external coordination, by senior management intervention, or by formal organizational structure.

Second, organizations can develop and impose a strong team architecture, or internal structure of roles and norms, that may substantially reduce the need for internal coordination and thus reserve team resources for external activities. Ginnett (1990), for example, proposed that cockpit crew members step into a preexisting "shell," which defines expectations, task designs, and work contexts, allowing crew members to perform effectively even if they have never worked together.

Third, organizations can design cross-functional teams or self-managing teams to reduce the need for external activities by combining suppliers and customers as one team or by including as many skills and resources as possible within the team boundary (Cohen et al., 1996). Finally, organizational teams can reduce the need for external activities by flexibly managing their boundaries (Arrow & McGrath, 1995). As suggested by Ancona and Caldwell (1998), teams often maintain an open team configuration by inviting in external experts, changing team composition over time, including both full- and part-time members, and separating core and peripheral members. These alternative strategies for external integration are cases of substitution of one structure for another that fulfills the same function (Gresov & Drazin, 1997, p. 414). Critical research questions include: (a) How do different strategies complement or nullify each other? and (b) How does a team select its strategies among functionally equivalent alternatives?

### **IMPLICATIONS FOR PRACTICE**

Although fragmented pieces of evidence supporting the present framework are currently available, the overall relationships pro-

posed await further empirical testing. If the framework proposed here receives wider empirical validation, it could be easily translated into organizational interventions for teams. Having a model that identifies an appropriate level of external activities for a given set of structural contingencies would be beneficial in designing a high performance team. Managers may need to take a team's structural properties into account when they formulate and adjust that team's core design features. Similarly, taking its structural context into account, a team may make a strategic choice between internal and external foci that should result in more efficient use of its limited resources.

Aside from its direct contribution to team effectiveness, appropriate use of external activities may enhance organizational-level functions, such as organizational learning and organizational culture. Innovations by teams do not necessarily lead to innovations by the whole organization (Meyer & Gupta, 1994). This proposition highlights the difficulty of disseminating information and knowledge across organizational units (Rousseau, 1997). Having teams with high capacity for exporting and importing information and knowledge across their boundaries may be an antecedent of effective knowledge transfer or successful organizational learning.

In addition, external activities may play a critical role in developing shared understandings and values among organizational members. Scholars of organizational culture have assumed that organizational members develop shared values and a common cognitive structure via managerial influences and interactions among members (e.g., O'Reilly & Chatman, 1996). However, given that groups comprise an immediate social context for most organizational members, permeability of group boundaries may largely determine the extent to which an organization can ingrain shared values across its subunits. In many cases, the group boundary functions as a membrane that wraps organizational members within the group and filters the flow of information and knowledge as well as social influences. For this reason, if the membrane separating the group from its environment is not permeable (inadequate external activities), the formation of organization-wide culture can be blocked by group subcultures.



## CONCLUSION

This article selectively reviewed the group literature focusing on external activities as a springboard for developing a theory that explains when a team's external activities contribute to its effectiveness and how a team's various characteristics influence its external activities. Although the present model is only tentative and awaits empirical validation, it provides a rich ground for further research and team management. The integration of internal and external perspectives improves and reformulates our understanding of team effectiveness by providing a holistic and realistic view of team functioning (McGrath, 1997). Further conceptual and empirical efforts could focus on the mechanism through which internal and external activities operate together to produce high team effectiveness.

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