

Understanding the Impact of Contexts  
on Factors Leading to Global  
Team Performance

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Working Paper No.: 03-005

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**Submitted to the Special Issue of**  
**Management International Review**

**September 2003**

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## **Abstract**

Previous research has suggested that future research on global teams should examine influences on such teams beyond leadership control. To this aim, this research examines how team leaders can affect the setting within which global team behavior takes place when the leader can not be present. Specifically, this study investigates the effect of autonomy, strategic clarity, team climate, initial meeting and length of initial meeting on project performance. In particular, we address whether the initial meeting and the length of the initial meeting have a direct or indirect effect on performance. Our results indicate that autonomy and strategic clarity have a direct, positive effect on project performance while the initial meeting, the length of the initial meeting and climate do not have a significant impact on project performance. Implications of these results for managers of global teams are discussed.

## **Introduction**

The importance of teams in the new product development process is well established. It's not surprising, then, that research on NPD teams has been so voluminous. What is surprising, though, is that despite all the research that has been done on teams and their effectiveness, little research has examined the effect of context, i.e., the setting within which teams function and team member behavior takes place, on team performance (Ancona & Caldwell, 1992; Gibson and Zellmer-Bruhn, 2001; Mohrman, Cohen & Mohrman, 1995). This gap is all the more surprising in light of the increasing reliance on global teams as a mechanism for new product development (McDonough, Kahn & Barczak, 2001). As a result, research on the effects of context on team performance have never been more important.

As firms move from domestic entities to global entities, and as more and more of their NPD teams become global, the effects of context can quickly become both more important and more problematic (Adler, 1991; Gluesing & Gibson, 2004). Traditional teams work in a single context that is characterized by a common physical location, a common national culture, a single geography, and individuals who speak a common language. Team members also work in a single time zone and have frequent face-to-face and informal interactions and information sharing (Gluesing & Gibson, 2004). Global teams, in contrast, work in multiple contexts characterized by multiple cultures, work in multiple locations separated by multiple time zones, speak a variety of languages, with few opportunities for face-to-face and informal interaction and information sharing.

Not only are there significant contextual differences between global NPD teams and traditional NPD teams, but the contexts of global teams can also be characterized as more complex and dynamic. These differences and the increase in complexity and dynamism can make working together more problematic. They may, in effect, change the "rules of the game" for managing NPD teams. What works for traditional teams simply may not apply in global teams. Exactly what will work in global teams and how they can most effectively be managed, however is not clear.

Some research on global teams has suggested that the leadership of global teams, particularly at the beginning of the project when team members meet face-to-face, can be important (Grove & Hallowell, 1998). It is here that the leader can play an instrumental role in helping the team to articulate project goals, to help define roles and responsibilities, to help break down barriers between team members, and to begin to build commitment to the project and the team. But, as other researchers have pointed out, the leaders of global teams only meet face-to-face with their team members on an occasional basis at best (McDonough & Cedrone, 2000). How then, do leaders lead when team members are geographically dispersed? How do they exert control and ensure high team performance?

Other researchers have argued that multiple and/or shared leadership may exist across the different geographic locations and that such shared leadership may actually help global team performance (Govindarajan and Gupta, 2001; Solomon, 1998). Gluesing (1998), however, found that leadership itself doesn't change hands, but that power and influence do. This raises the questions of what the sources of this power and influence are and how they can be used to manage global teams effectively.

The purpose of our study is to investigate how global teams and their members can be managed and controlled when their leaders are only rarely present. Specifically, we are interested in examining the effects of contexts on team performance and how global team leaders and management can shape the behavior of team members from a distance. Given that global team leaders cannot be present at every member location all of the time, how can they affect the setting within which global team member behavior takes place? And, how can they impact on team performance?

The contribution of this study is twofold. First, it addresses the need to examine sources of influence on global team members beyond traditional leadership control. This is important because the team leader is often not present at most team member locations and thus, has little opportunity to impact team member behavior. Likewise, because global team members operate within multiple contexts, it is important to create a setting within which appropriate team behavior can take place. Second, we empirically examine the role, if any, of an initial face-to-face team meeting on global team performance. Most of the literature on global teams espouses the importance of such a meeting, however, the support for an initial meeting is largely anecdotal. To our knowledge, this is the first attempt to empirically investigate the impact of an initial face-to-face meeting on global team performance.

## **Background**

Team leaders can exert influence on team members directly through control mechanisms such as assigning responsibilities, setting schedules, developing project plans, and evaluating performance (Davison, 1994; Solomon, 1995). But, the strength of these control mechanisms may dissipate over time and over distance. The nature of global teams may also affect the strength and effectiveness of these control mechanisms. Understanding how to exert control when they are not present is thus an important problem confronting the leaders of global teams. We are particularly interested in examining factors that may act as surrogates for leader control when the leader is not present including, autonomy, climate and strategic clarity and in investigating their impact on project performance. Given the importance of the initial team meeting to global teams and the potential affect it can have on the development of the setting

within which global team members behave including the creation of norms and setting goals (Barczak and McDonough, forthcoming; Boutellier, et al., 1998; Gluesing, 1998), we also investigate whether the initial meeting and the length of the initial meeting have a direct or indirect effect on project performance.

The functional and language differences that exist in global teams, as well as, their cultural diversity, mean that global team members possess a variety of perspectives, values, skills and attributes (Maznevski, 1994). But, while greater heterogeneity among team members has been found to lead to greater creativity and problem solving (Adler, 1991; Guzzo & Dickson, 1996; McCalman 1996), such groups are also more likely to have conflicts, turnover, and communication breakdowns (Sivakumar and Nakata, 2003; Smith and Berg, 1997). Moreover, greater diversity among team members means that it can take longer for the team to “discover congruencies that can provide a foundation for interaction” (Northcraft, Polzer, Neale and Kramer, 1995). Thus, understanding how to create a setting for the global team that will aid in the discovery of congruencies and facilitate more effective performance is important.

The physical distance between team members and their team leader also makes it difficult for the leader to exert direct control on member behaviors. Add to this the time differences between geographic locations, (i.e., Japan vs. US) and leaders have little time to actually communicate with or exert any influence over team members. Thus, it is imperative that leaders create a setting to guide member behavior when they are apart and isolated in their home locations.

Finally, it is easy for global team members to lose touch with their team and their project as a consequence of being out of sight, out of mind. To inhibit this out of sight, out of mind mentality from developing, team leaders need to create a setting for team members that enable them to be connected to the team and the project when they are off in their own country.

## **Literature Review**

Like other types of teams, global teams face the challenge of getting a diverse group of individuals from different functional areas to work together effectively for a finite period of time to accomplish specific project objectives. These teams must build trust, meet schedules and adhere to budget guidelines. Global teams, however, face even greater challenges because of their geographical separation and diverse cultures, values, and language (Barczak & McDonough; forthcoming; McDonough, Kahn & Barczak, 2001). Specifically, global teams face greater behavioral and project management challenges than other types of teams (McDonough, Kahn, and Barczak, 2001). McDonough, Kahn & Barczak (2001) found that achieving trust between team members, developing effective interpersonal relationships, and fostering effective communication among members of global teams are all more difficult to achieve in global teams versus co-located or virtual teams. This suggests that the job of the project leader is more difficult because global team members are physically and psychologically isolated, and often work on the

project without the benefit of close supervision. Even when the team is together for periodic meetings at the beginning of the project and throughout the duration of the project, the team leader has few opportunities to exert direct control over team members.

The challenge, then, for leaders of global teams is to create a setting that will have the effect of influencing the behavior of global team members in an organizationally desirable direction. Prior research suggests that three factors – climate, strategic clarity, and autonomy - may potentially play an important role in creating this setting.

### Climate

The climate that the leader and the organization create is critical to helping guide team member behavior when they are physically separated from the leader and working alone. A climate is a set of characteristics specific to an organization that are reflected in the attitudes and expectations held by its members (Siegel and Kaemmerer, 1978; Schneider and Hall 1972). Schneider (1975) states that organizations have many climates, thus, it is important to identify the specific climate with which one is dealing. Climate within a team is the shared perceptions members hold about meaningful phenomena (Webber, 2002). The literature on organizational climate generally concludes that a more positive climate (in terms of rewards, clear goals, etc), the more effective is the organization or work group (Heller, et al., 1982).). In this study, we define team climate as the sense of urgency and importance team members have about their project. McDonough and Pearson (1993) found that urgency moderates the relationship between technological uncertainty and project performance. When developing products that are more urgent, greater success was associated with relying on technologies with which the companies was more familiar. Because a sense of urgency and importance helps keep the team focused and committed to the project schedule it is also critical that the “priority image” of a project be communicated to the team (Thamhain, 1990). Building this priority image can help foster a climate of active participation among team members which in turn will help direct team member behavior in organizationally appropriate directions (Thamhain, 1990). Thus, we hypothesize that:

H1: Climate will have a positive impact on **global team** project performance.

### Strategic Clarity

Strategic clarity refers to the degree of clarity and knowledge team members have about their organization’s new product strategy. Knowing and understanding their firm’s new product strategy enables team members to see how they fit into the organization and how they can contribute to the firm’s success. It also provides boundaries for individuals.

Strategy is different from goals/objectives in that a strategy is a master plan that guides, in this case, new product development efforts (Cooper, 2001). Goals or objectives, by contrast, are specific outcomes the team or organization is supposed to accomplish. For example, an organization may have a goal, by 2005, of having 30% of their sales come from new products that didn't exist four years ago. Their strategy, in turn, may specify that any new product efforts should address particular market segments and focus on specific technologies.

The need for a new product strategy is a consistent theme in the new product literature (Griffin, 1997). In fact, studies show that high performing companies are more likely to have a specific new product strategy (Booz, Allen and Hamilton, 1982; Cooper, 2001; Griffin, 1997; Mercer, 1994). McDonough and Griffin (2000) also found that firms with consistent, high NPD performance established a strategy and made sure to clearly articulate that strategy to team members so that they understood it. In these instances, a new product strategy serves as a feedforward control mechanism (McDonough and Leifer, 1986). In feedforward control, behavior is controlled or directed in advance of work being done by conditioning the individual to act in a particular manner. McDonough and Leifer (1986) found that effective control was a function of establishing a set of boundaries or constraints that represented the outer limits of acceptable behavior. These boundaries have the dual effect of directing and controlling behavior, on the one hand, while encouraging and fostering innovation, on the other. New product strategies, if clearly articulated and communicated, can provide boundaries for behavior and decision making. Thus, we hypothesize that:

H2: A clearly articulated strategy will have a positive impact on **global team** project performance.

### Autonomy

Autonomy is the degree to which team members experience substantial freedom and discretion in their work (Hackman, 1987; Kirkman and Rosen, 1999). Prior research has found that autonomy is positively and significantly related to productivity (Kirkman and Rosen, 1999; Thomas and Tymon, 1994; Wellins et al., 1991) job satisfaction (Kirkman and Rosen, 1999; Thomas and Tymon, 1994; Wellins et al., 1991) and commitment (Kirkman and Rosen, 1999; Manz and Sims, 1993; Steers, 1977). Similarly, in studies of cross-functional NPD teams, the evidence suggests a strong relationship between autonomy and performance. For example, Hershock et al. (1994) and McDonough and Barczak (1991) found that the speed with which new products were developed was significantly related to the amount of freedom and responsibility given to team members. Since the team has the most up-to-date and relevant information related to a project, a high degree of autonomy enables team members to make decisions quickly, thereby contributing to faster development times. Donnellon (1993) observed that greater authority and autonomy

to make their own decisions about objectives and budgets helped teams stay focused on the task and generated commitment to the project. If team members are not involved in determining their own destiny, they are less likely to be committed to the project. Less commitment implies less focus on the project and a tendency to ignore responsibilities. Finally, Bowen et al. (1994) argue that team members who share a sense of responsibility and authority for a project will have greater performance than members who do not feel this way. A greater sense of responsibility and accountability for a project can engender commitment, which in turn, can lead to better performance. Thus, we hypothesize that:

H3: Autonomy will have a positive impact on **global team** project performance.

### Initial Face-to-Face Meeting

But how do managers set the stage for team members to work effectively while they are apart? How do they make clear the new product strategy and climate and how do they let global team members know how much autonomy they have? One way to achieve this is to have an initial, kick-off meeting at the beginning of the project. Meeting face-to-face enables global teams to begin to build interpersonal relationships (Davison, 1994; Maznevski & Chudoba, 2000) and trust (Boutellier et al., 1998; Norhia and Eccles, 1992) as well as to set project goals, develop project plans and define roles and responsibilities (Barczak and McDonough, forthcoming; Davison, 1994; Solomon, 1995). It has been suggested that these initial face-to-face meetings impact team performance, however, this evidence is mostly anecdotal or based on case studies (Boutellier, et al, 1998; Gluesing, 1998; Govindarajan and Gupta, 2001). Barczak and McDonough (forthcoming) found that an initial meeting was positively related to project performance but their indicator was correlation analysis. We argue that these initial meetings may not impact performance directly but rather may help to set the stage by defining climate, autonomy, and strategic clarity which in turn, impact positively on project performance. Thus, we hypothesize that:

H4: Autonomy, climate and strategic clarity will mediate the relationship between having an initial face-to-face meeting and project performance.

Moreover, evidence suggests that the length of this initial meeting is an important consideration in setting the stage. Maznevski and DiStefano (2000) argue that global teams should meet for a longer period of time at the beginning of the team's tenure in order to build the foundation for future communication and interaction. Boutellier et al. (1998) suggest that the duration of these meetings is a function of how well team members know each other. In cases where team members don't know each other well, meeting for longer periods of time at the beginning of the project is necessary to build personal networks and develop mutual trust. Barczak and McDonough (forthcoming) found that longer team meetings were correlated with

shorter time to market. We propose that the longer the initial meeting, the greater the likelihood that team members will be effective acting autonomously and will own the project climate and strategic clarity which in turn will impact positively on project performance. Thus, we hypothesize that:

H5: Autonomy, climate and strategic clarity will mediate the relationship between the length of the initial meeting and project performance.

## **Methodology**

From an earlier study that examined the use of different types of NPD teams (See McDonough, Kahn & Barczak, 2001), we were able to identify a sample of 5 companies with global teams that were willing to participate in a second phase of research. These five companies develop, manufacture and market consumer and industrial products and services, such as computers and computer services, data storage devices and software, electronic measurement equipment, and adhesive and coating materials and systems. The firms ranged in size from 1000 employees to more than 10,000 employees with annual company sales from \$250 million to over \$1 billion.

Within each company, new product development managers were contacted by telephone and asked to identify global NPD projects currently in progress (though they could be in different stages of development). Team leaders of these projects were then contacted to solicit their aid in getting team members to complete a mail survey. In completing the questionnaire, respondents were asked to focus on the specific project that had been identified earlier. Data were collected from 58 members of global NPD teams representing eleven global teams from 5 companies. Though multiple definitions of global teams exist (cf. Maznevski and Chudoba, 2000; McDonough, Kahn and Barczak, 2001), we define global teams as those in which team members are located on multiple continents or in multiple countries on the same continent.

Respondents were instructed to return the completed questionnaires directly to the researcher or a key liaison in each organization. Multiple respondents from each team (i.e., team members) were requested to complete the survey in order to obtain a cross-section of opinion (Ancona and Caldwell 1992a; Henderson and Lee 1992; Sarin and Mahajan 2001). Each team leader was asked to forward the questionnaire to all core team members<sup>1</sup>. The number of informants for each team ranged from one to seven, with an average of 4.3 team members. Team member responses represented a variety of functional areas.

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<sup>1</sup> A core team member is someone who is involved with an NPD project throughout its' development from idea conception to market launch.

## Measures

Autonomy and climate were measured on 7 point scales where 1= Strongly Disagree and 7 = Strongly Agree. Climate was measured by five items and drawn from McDonough (2000) and McDonough & Pearson (1993). Autonomy was measured by five items, drawn from McDonough (2000) and adapted from Thomas and Tymon (1994).

Strategic clarity was measured by 2 items and was adapted from McDonough and Griffin (2000). Specifically, team members were asked how certain they were that they knew their organization's new product strategy and the clarity of that strategy. Both items were measured on a 7 point scale where 1 = not at all and 7 = completely.

Exploratory factor analysis was used to verify whether specific items loaded on the particular variables discussed above. Three multi-item factors resulted from this analysis – climate, autonomy, and strategic clarity. All items loaded as expected and unambiguously, except for one item used to measure climate. This item cross-loaded on two factors ( $>.45$ ) and thus, was eliminated from further analysis. Coefficient alpha was used to assess the internal reliability of all the constructs. All alphas exceed the minimum threshold of .70 recommended by Nunnally (1978). Correlations amongst all the variables in the analysis and their coefficient alphas can be found in Table 1. The factor loadings of each item for its respective factor are provided in Table 2.

Initial meeting was measured by asking respondents whether or not their team met face-to-face at the beginning of the project. Length of initial meeting was a single item that asked respondents how many times the core team met during the project over a one year period. Three of the eleven teams did not meet at the beginning of the project, thus, we coded length of meeting for those teams as zero. For the teams that did meet at the beginning of the project, we recorded the actual number of days that the team met.

Project members were asked to assess their project's performance by indicating whether their team was below, on par with or above average in comparison to other new product development teams on a variety of issues. Six items, taken from Sarin and Mahajan (2001), were used and rated on a 7 point scale where 1 = far below average and 7 = far above average. An exploratory factor analysis of these items resulted in one factor. The factor loadings for each item used to measure project performance are displayed in Table 3.

Self-report measures of performance are often criticized based on the argument that some individuals are unable to report their performance accurately due to poor introspection thereby inflating their perception of performance. We asked team members to evaluate their team's performance rather than their own performance. Thus, the inflation effect should be smaller than in the situation when individuals are asked to assess their own performance. Cooper (1981) achieved accuracy levels of over

eighty percent asking team members to assess the projects with which they were involved. Finally, Heneman (1974) found that self-report measures had less restriction of range and leniency than supervisor ratings when anonymity was promised. We promised strict confidentiality of respondents' answers and indicated that they would be for research purposes only.

## **Results**

To examine whether autonomy, climate, and strategic clarity mediate the relationship between initial meeting and length of initial meeting and project performance, we followed the procedure recommended by Baron and Kenny (1986). This procedure also allowed us to test all of our hypotheses. First, we regressed the mediators (autonomy, climate, strategic clarity) on each of the independent variables (initial meeting; length of initial meeting); second, we regressed the dependent variable (project performance) on each of the independent variables; and third, we regressed the dependent variable on each of the independent variables and the mediators. To provide evidence of mediation, the following conditions must be met in each of the above regressions: a) the independent variables (initial meeting and length of initial meeting) and the mediators (autonomy, climate, strategic clarity) should be related, b) initial meeting and length of initial meeting and the dependent variable (project performance) should be related, and c) the relationship between initial meeting and length of initial meeting and the performance variable should become non-significant when the effects of the mediators are controlled (Baron and Kenny, 1986).

To explore the direct effects of initial meeting and length of initial meeting on autonomy, climate, and strategic clarity, we used two separate multivariate regressions. Although the mediator variables are not significantly correlated, we undertook multivariate regression rather than performing separate regressions, one for each mediator (dependent) variable. This is a more conservative test that accounts for any multicollinearity between the dependent variables. "Multivariate regression controls for the correlation between multiple dependent variables when testing their relationships with independent variables. This approach minimizes false indications of univariate impact by controlling for interactions with all other variables while testing the effects of the independent variables on each dependent variable, resulting in a conservative test of the hypothesis" (Markham and Griffin 1998, p. 446). The results of the test indicate that an initial meeting has no significant impact on climate, strategic clarity or autonomy (See Table 4). By contrast, length of initial meeting has a significant but negative impact on climate and strategic clarity. Length of initial meeting has no impact on autonomy (See Table 7).

We next investigated the direct effect of initial meeting and length of initial meeting on project performance. The results show that neither the initial meeting or the length of initial meeting have an effect on project performance (See Tables 5 and 8).

Lastly, we examined the indirect effect of initial meeting and length of initial meeting on project performance by investigating whether or not autonomy, climate, and strategic clarity mediate the initial meeting and length of meeting-performance relationship. Table 6 shows that initial meeting and climate are not significantly related to project performance while autonomy and strategic clarity are positively and significantly related. Table 9 indicates that length of initial meeting and climate are not significantly related to project performance but autonomy and strategic clarity are, again, positively and significantly related.

Following the guidelines of Baron and Kenny (1986), our results suggest that autonomy, climate and strategic clarity do not mediate the relationship between initial meeting or length of initial meeting and project performance. Thus, hypotheses 4 and 5 are not supported. Rather, autonomy and strategic clarity have a direct effect on project performance providing support for hypotheses 2 and 3. By contrast, initial meeting, length of initial meeting and climate do not impact project performance significantly. Thus, hypothesis 1 is not supported. Although length of initial meeting impacts strategic clarity and strategic clarity impacts project performance, the rules of mediation as outlined by Baron and Kenny (1986) are not met. Thus, strategic clarity is not a mediator of the length of initial meeting –performance relationship.

## **Discussion**

In this study, we sought to add to our understanding of how global teams and their members can be managed and controlled when their leaders are only rarely present. We were interested in investigating how global team leaders can shape the behavior of team members from a distance, and in particular, how global team leaders can affect the setting within which global team member behavior takes place and so, impact on global team performance. Prior research suggested that several variables including, the amount of autonomy that is given to the team, the climate within which the team operates, and the degree to which the new product strategy is clearly articulated and communicated, can impact on the setting for team behavior, which in turn, can effect performance.

In our investigation of these variables, we found that team climate, defined as the urgency and importance associated with the project, was not associated with performance. The results of prior research had suggested that making it clear to team members that the project will have a significant impact on the company, is of high priority, and needs to be completed quickly, will cause them to work more diligently on the project (Thamhain, 1990) and thus have a positive impact on the performance of the project. Our findings suggest that there is a gap between generating a climate of urgency and generating higher performance in the form of efficiency, adherence to budget and schedule, attainment of goals, and the like. While climate may not directly impact on performance, however, it may be that a climate of urgency

may create a desire on the part of team members to work more diligently. But, this desire may, in turn, need to be complemented with the right sort of leadership, resources, and so forth. This suggests future research should investigate the possibility that climate may serve as a moderator of the relationship between performance and other variables.

We also examined autonomy and strategic clarity. Both were found to be significantly and positively related to project performance. Prior research on traditional teams suggested that the combination of setting boundaries and providing autonomy within those boundaries has a positive impact on performance (Donnellon, 1993; McDonough & Leifer, 1986). Our results suggest that, indeed, by both communicating a clear new product strategy and then allowing global team members to make their own decisions about technologies, solving problems, and tasks, and giving them the freedom to make risky project decisions, global team leaders are able to positively affect performance. While clearly our results are merely suggestive, they seem to imply that providing clear boundaries and freedom within them are a combination that may work in both traditional as well as global teams.

We were also interested in exploring how global team leaders might go about making clear to global team members what the new product strategy is, the urgency of their project, and how much autonomy they have to make decisions. Prior research has suggested that this can be accomplished through face-to-face meetings at the beginning of a global project. Our results, however, suggest that autonomy, climate and strategic clarity do not mediate the relationship between performance and having a face-to-face team meeting at the beginning of a global project. This finding is contrary to current thought and is surprising given the literature on global teams that emphasizes the criticality of bringing team members together at the beginning of a project to build interpersonal relationships and trust, set goals, develop project plans and define roles and responsibilities (Barczak and McDonough, forthcoming; Boutellier, et al.1998; Davison, 1994; Maznevski and Chudoba, 2000). It implies that an initial meeting may not be needed to articulate the project's new product strategy, create a climate of urgency or instill autonomy in team members. But if an initial meeting is not the mechanism for creating the setting within which appropriate global team behavior takes place, what is the mechanism that does this? Clearly, more empirical research is needed to examine the role, if any, of initial meetings on global team performance.

Our results also suggest that the length of face-to-face meetings at the beginning of a global project impact negatively on team climate and strategic clarity but have no effect on the autonomy of the team. These results indicate that the longer the initial meeting, the less urgent the project charged to the global NPD team. That is, urgent projects can't afford to and likely should not take a lot of time at the beginning of the project but rather should get down to work. By contrast, less urgent projects may have the luxury of more time and so longer initial meetings are possible.

Our results also insinuate that the longer the initial meeting, the lower the clarity of the new product strategy for the project. It may be that global teams that have long initial meetings may be doing so because their new product strategy is not clear. Such teams may be using this initial meeting as the mechanism for clarifying and agreeing upon the project's new product strategy.

These results also indicate that the length of the initial meeting is apparently not important to the amount of decision making discretion available to global team members. It may be that global team leaders need very little time to instill a sense of autonomy within global team members. It is also possible that global team members may be selected in part because of their ability to act autonomously. Unfortunately, it was not possible to explore these possibilities in the current study. It may be instructive for future research, however, to explore this issue in more detail.

We also found that the length of face-to-face meetings at the beginning of a global project had no direct impact on project performance. Other researchers have proposed that by meeting for a longer period of time at the beginning of a project, a foundation will be built for future communication and interaction (Maznevski and DiStefano, 2000) and that longer meetings are necessary to build personal networks and develop mutual trust (Boutellier et al., 1998). While we suspect that there are benefits to getting team members to meet face-to-face at the beginning of the project, particularly if they don't know each other, the team and relationship building that occurred in the global teams that were the subject of our study did not appear to impact the performance of the project. It is important to point out, however, that the combination of the small size of our sample and that all teams did not meet at the beginning of the project may account for our finding. Future research with larger sample sizes should be undertaken to examine further the relationship between length of meeting and global team performance.

### **Managerial Implications**

From a managerial perspective, understanding that autonomy and strategic clarity impact project performance is important. It suggests that managers and team leaders need to clearly articulate the new product strategy guiding individual NPD projects. As well, it implies that they must consciously take actions to provide discretion to team members by providing them decision-making power and responsibility. Team leaders can create autonomous teams by helping team members define and analyze problems, not making decisions for them, and involving the team in setting project goals, project planning, and defining roles and responsibilities.

The lack of impact of the initial meeting or length of initial meeting on project performance either directly or indirectly suggests that the initial meeting may not be as critical an issue in creating effective global teams as has been thought. Though an initial meeting may have positive benefits, these do not seem to translate to the performance of the project. Thus, managers and team leaders would do better

finding other ways to ensure that team members know and understand the new product strategy and the urgency of the project and creating a team that has the freedom and authority to make decisions about their new product project.

Even though team climate does not effect project performance, this does not mean that a sense of project urgency and importance should be ignored or discouraged. Clearly, many organizations are sensitive to market and competitive pressures. As a result, there is a constant need to develop and market new products quickly. Thus, new product managers and team leaders need to communicate the degree of urgency and importance of a particular project to team members and ensure that the team stays focused and on-track.

### **Limitations of the Study**

Some potential limitations need to be kept in mind when interpreting the findings of this study. While our sample came from a number of industries, the number of companies and teams represented is small. We undertook multiple attempts to increase the size of our sample but these efforts proved fruitless. One reason for this may be that global teams are a relatively new phenomena and thus, their usage is limited (McDonough, Kahn & Barczak, 2001).

We utilized only one measure of new product performance in our study, though other measures of performance exist (Griffin and Page 1996). Future research might examine the impact, if any, of climate, autonomy, strategic clarity, and an initial meeting on these performance measures.

The use of cross-sectional data limits our ability to infer causality among the variables studied. Similarly, asking respondents to provide retrospective assessments of relevant issues opens up the possibility that respondents forgot information or had a biased perspective of the issues upon reflection. Thus, our understanding of the effect of climate, autonomy, strategic clarity, and initial meeting on new product performance would benefit from a longitudinal study.

Finally, our results suggest that the process of creating the setting within which global team members behave appropriately is difficult to undertake and therefore, difficult to study. This implies that further research, particularly qualitative studies are needed to uncover the elements of the setting that guide global team behavior when leaders are not and can not be present.

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**Table 1**  
**Correlations and Reliability Coefficients**

	Autonomy	Climate	Strategic Clarity	Project Performance
Autonomy	.88			
Climate	.238	.85		
Strategic Clarity	.111	.274	<i>.94</i>	
Project Performance	.417*	.105	.325	<i>.87</i>
Initial Meeting	-.203	-.235	-.121	-.013
Length of Initial Meeting	.223	-.233	-.241	.006

Note: The italicized numbers on the diagonal represent the coefficient alpha's for each construct. \*  $p < .05$ , \*\*  $p < .01$

**Table 2**  
**Factor Loadings**

	<b>Autonomy</b>	<b>Climate</b>	<b>Strategic Clarity</b>
Team members make their own decisions about technologies	.739		
Team members make their own decisions about solving problems	.916		
Team members make their own decisions about tasks	.880		
Team members have freedom to make risky project decisions	.758		
Team members have the final say about project related decisions	.755		
Team feels a sense of urgency to complete the project		.830	
Project has a high priority in the organization		.816	
Project will have a significant impact on the organization		.790	
Important to complete the project quickly		.769	
Team members know the organization's new product strategy			.960
The organization's new product strategy is clear			.849

**Table 3**  
**Factor Loadings for Project Performance**

<b>Compared to other product development teams, what is your team's:</b>	<b>Project Performance</b>
Reputation for work excellence	.770
Attainment of goals set	.651
Efficiency in operation	.919
Morale	.812
Adherence to schedule	.719
Adherence to budget	.811

**Table 4**  
**Initial Meeting and Mediator Variables**  
**Multivariate Regression**

	<b>Initial Meeting</b>	<b>Initial Meeting</b>
<b>Dependent Variables</b>	<b>Beta</b>	<b>t- value</b>
Autonomy	-.526	-1.27
Climate	-.516	-1.46
Strategic Clarity	-.487	-1.04

**Table 5**  
**Initial Meeting and Project Performance**  
**Regression**

	<b>Project Performance</b>	<b>Project Performance</b>
<b>Independent Variable</b>	<b>Beta</b>	<b>t- value</b>
Initial Meeting	-.011	-.08

**Table 6**  
**Independent and Mediator Variables and Project Performance**

	<b>Project Performance</b>	<b>Project Performance</b>
	<b>Beta Value</b>	<b>t- value</b>
<b>Autonomy</b>	.391	3.10**
<b>Climate</b>	-.063	-.48
<b>Strategic Clarity</b>	.259	2.04*
<b>Initial Meeting</b>	.073	.58

\* p < .05    \*\* p<.01

**Table 7**  
**Length of Initial Meeting and Mediator Variables**  
**Multivariate Regression**

	<b>Length of Initial Meeting</b>	<b>Length of Initial Meeting</b>
<b>Dependent Variables</b>	<b>Beta</b>	<b>t- value</b>
Autonomy	.125	1.05
Climate	-.264	-2.78*
Strategic Clarity	-.283	-2.27*

\* p < .05

**Table 8**  
**Length of Initial Meeting and Project Performance**  
**Regression**

	<b>Project Performance</b>	<b>Project Performance</b>
<b>Independent Variable</b>	<b>Beta</b>	<b>t- value</b>
Length of Initial Meeting	.009	.069

**Table 9**  
**Independent and Mediator Variables and Project Performance**

	<b>Project Performance</b>	<b>Project Performance</b>
	<b>Beta Value</b>	<b>t- value</b>
<b>Autonomy</b>	.381	2.93**
<b>Climate</b>	-.074	-.54
<b>Strategic Clarity</b>	.256	1.96*
<b>Length of Initial Meeting</b>	.002	-.02

\* p < .10    \*\* p < .01