

**THE INFLUENCE OF TEAM COHESIVENESS ON NEW PRODUCT  
PERFORMANCE**

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Departmental Honors Thesis  
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## **Abstract**

Through this study team cohesiveness during new product development (NPD) is examined according to its effect on new product performance. Two types of team cohesiveness exist: task and interpersonal. Task cohesiveness is the measure of a team's shared commitment to its task, while interpersonal cohesiveness is the measure of the team member's attraction to the group. Antecedents and consequences of task and interpersonal cohesiveness are explored as well as moderators of the cohesiveness-performance relationship. Primary research was conducted in order to establish the relationship between team cohesiveness and new product performance. In-depth interviews were conducted with three NPD team members for each of the four NPD projects analyzed. In addition to conducting primary research, previous research relating to NPD and team cohesiveness was examined and these two research areas were merged in order to develop this study's theory. Antecedents for task cohesiveness include effective team goals, organizational issues, and cross-functional issues, while task related conflict and increased individual effort were found to be consequences of task cohesiveness. Antecedents for interpersonal cohesiveness include organizational issues and cross-functional issues, while group think, conflict harmonization, superordinate identity, and distraction from task were found to be consequences of interpersonal cohesiveness. Organizational norms, innovative versus incremental products, and additive versus disjunctive tasks were found to be moderators of the cohesiveness-performance relationships for both

models. In addition, high performance goals were found to be a moderator for interpersonal cohesiveness.

## **Introduction**

New product development (NPD) is an organizational area that has enjoyed limited financial success. As a result, much research has been conducted in the area of new product development in the hope that the development process and the factors impacting it can be better understood and improved upon. Despite this great degree of scholarly study, new products have continued to fail at an alarmingly high rate, with estimates of new product failure ranging from 50% of all new products (Sivadas and Dwyer 2000) to as high as 95% (Berggren and Nacher 2001). Research in NPD is extensive, covering a broad range of topics, such as innovation, competitive advantage, and design engineering. One aspect that has not been focused on specifically in NPD, however, is the cohesiveness of the NPD team, despite extensive study of team cohesiveness in the area of small group research (i.e. – Carron 1982, Craig and Kelly 1999, Evans and Jarvis 1980, Kelly and Duran 1985, Widmeyer et al. 1985).

When considering the impact of cohesiveness on NPD teams, it is important to distinguish between the two types of cohesiveness: task and interpersonal. According to Carron's (1982, p. 124) definition of cohesiveness, two elements comprise this construct: "the tendency for a group to stick together" and "[the tendency for a group] to remain united in the pursuit of its goals and objectives."

From these distinct elements of cohesiveness the difference between interpersonal and task cohesiveness can be discerned. Interpersonal cohesiveness is the measure of the team member's attraction to the group (Evans and Jarvis 1980), while task cohesiveness is the measure of a team's shared commitment to its task (Hackman 1976, Goodman et al. 1987).

Through this study, team cohesiveness during new product development will be examined according to its effect on new product (NP) performance. The NPD process and the cohesiveness construct are complex issues, and their relationship needs to be explored because of its potential impact on the development and subsequent success of new products. In this paper, models are developed for both task and interpersonal cohesiveness, displaying the impact of each on new product performance. Moderating factors that impact the effectiveness of a team's cohesion, and hence the team's performance, are also incorporated. The models developed as a result of this research lead to the development of propositions concerning the relationship between cohesiveness, its moderators, and NPD success, as measured by new product performance. This study's theory is the result of a review of existing research augmented by qualitative data from in-depth interviews. Due to the lack of exploration in regard to team cohesiveness and its impact on NPD, this study will be useful in establishing propositions that can then be tested in a quantitative study.

## **The Exploratory Study**

In the exploratory phase of the research, twelve in-depth interviews were conducted to gain insight into team cohesiveness and its influence on new product performance. Cooperation was obtained from four firms located in a mid-sized Southeastern city. One firm has been selling over-the-counter medications, among other consumer products, for 126 years with annual revenue of approximately \$233.7 million and it currently employs 448 individuals. Another firm has been in the quick service restaurant industry for 73 years with an annual revenue of approximately \$246.9 million and 7,056 employees. In existence for 71 years and with 6,000 employees, one firm sells consumer snack food products and has annual revenue of approximately \$930 million. The final firm has been selling commercial and residential playground equipment for approximately 30 years, with annual revenue of approximately \$200 million and about 400 employees. The products examined in this study were chosen upon recommendation from the vice-presidents of marketing at each firm based on two criteria: performance and innovativeness. A total of four products were examined, one from each company, and the teams involved in the NPD process for these products were cross-functional. Performance was defined in terms of the short-term profitability of the product, and innovativeness was defined in terms of the novelty of a new product, whether for the company or the consumer. A product's immediate financial performance is separate from its innovativeness—a highly innovative product might have lackluster short-term financial performance, while a less innovative product might be immediately successful financially. In

addition, products selected have been on the market for a minimum of one year and a maximum of five years. The new products varied in terms of profitability and innovativeness. After the new product projects that used cross-functional teams were identified, interviews were conducted with the project team leader and two additional team members based on the team leader's suggestions. Interviews consisted of open-ended questions that pertained to issues such as commitment to the task, team members' level of enjoyment of the team experience, disagreements among team members, and comfort level when expressing opinions.

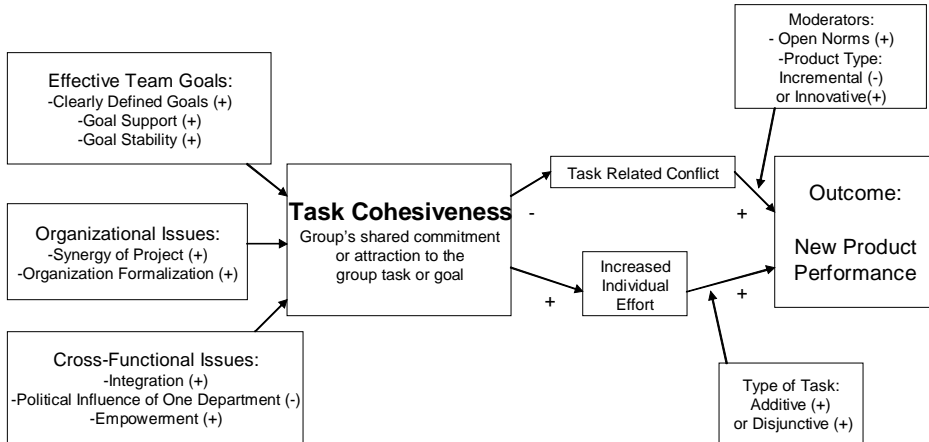
The research followed the grounded theory qualitative methodology of Strauss and Corbin (1990, p. 24), which they define as, "A systematic set of procedures to develop an inductively derived grounded theory about a phenomenon." Grounded theory relies on coding, which involves breaking down data and grouping it according to related concepts. According to Strauss and Corbin (1990), there are three coding procedures: open, axial, and selective coding. During open coding, phenomena are named and categorized, then, during axial coding, connections are made among these categories, and finally, during selective coding, the core category is selected and its relationships to other categories are identified and validated (Strauss and Corbin 1990). Grounded theory allows the researcher to enter at any of these three stages of coding. While some antecedents emerged through the interviews conducted, several a priori antecedents based on extant literature comprised pre-existing theory for this study. Grounded theory began with axial coding for a priori concepts, while open coding was used for concepts that emerged from the interviews. Primarily, a priori

concepts were identified in previous research as influences on the performance outcome; in this theory development they are applied to task cohesiveness. The theory that results from this combination of inductive and deductive reasoning is displayed in Figures 1 and 2.

Figure 1 presents the relationship among task cohesiveness antecedents—effective team goals and organizational and cross-functional issues, its consequences – task related conflict and increased individual effort, and moderators that impact the relationship between task cohesiveness consequences and new product performance. Figure 2 presents the relationship between organizational and cross-functional issues and interpersonal cohesiveness and also incorporates mediators and moderators of the relationship between interpersonal cohesiveness and new product performance. In the following sections, each phenomenon in the model will be discussed through an overview of the existing literature on the topic and evidence from the exploratory study. Propositions describing the relationships among the constructs in the model are provided. The individual constructs of the model are grouped within similar categories, and each construct will then be explained within the organization of that category. Three major constructs are common to both models, including organization formalization, integration, and political influence of one department; therefore, these constructs will be presented with the first model and then reviewed in the discussion of the second model.

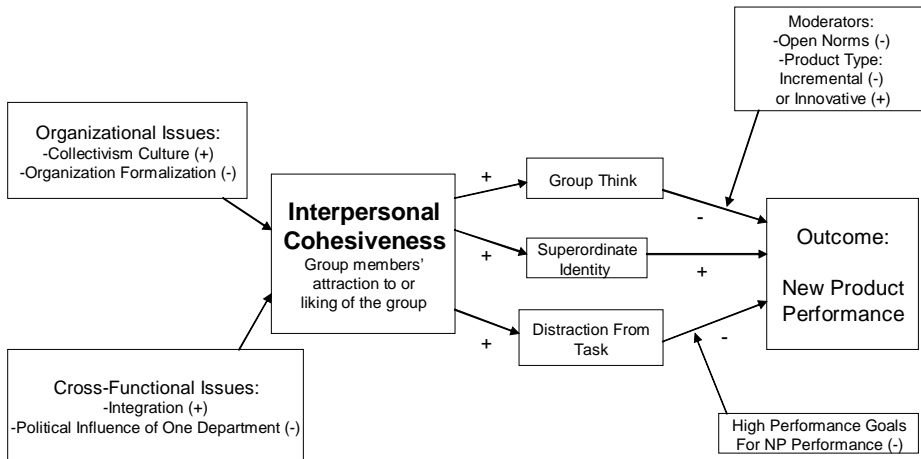
**Figure 1**

Task Cohesiveness in Inter-Functional NPD Teams



**Figure 2**

Interpersonal Cohesiveness in Inter-Functional NPD Teams



## **TASK COHESIVENESS**

### **Effective Team Goals**

According to Hamel and Prahalad (1989), an effective organizational vision has three components; it should be clear, supported by others in the organization, and stable (Lynn and Akgün 2001). A vision is described by Crawford and Di Benedetto (2000) as involving a team's direction, goals, and objectives (Lynn and Akgün 2001). While organizational visions are separate from team goals, they are related. Just like organizational visions, team goals for NPD teams must be articulated as essentially the same, fully understood, and supported by all departments involved (Adams et al. 1998). These components of team goals influence task cohesiveness because they prevent conflicts which arise from different agendas and clarify the roles of everyone involved in the NPD process (Adams et al. 1998, Pinto et al. 1993). Since task cohesiveness centers around the extent to which a team works together to achieve a common goal, the clarity, stability and support for an NPD team's goals are essential for any level of task cohesiveness to exist.

### *Clearly Defined Goals*

According to McDonough (2000, p. 223), providing cross functional teams with clear goals serves two purposes: "they provide a common focal point for the team's efforts, while on the other hand they constrain the team's efforts within boundaries." Previous research suggests that goals indirectly impact project performance because they create cooperation among cross-functional teams (Pinto et

al. 1993, McDonough 2000). This cooperation, centered on clear and common goals, creates task cohesiveness. Clear goals provide NPD teams with direction and permit teams to work more effectively during the NPD process by reducing disagreements among cross-functional team members. Several studies link clear visions with NP success among products that were radical innovations (Song and Montoya Weiss 1998, Rice et al. 1998, Lynn and Akgün 2001). Lynn and Akgün (2001) suggest that, for incremental innovations, a clear vision is equally important but is likely already in place since incremental innovations are generally expansions or modifications to current product offerings. Therefore, the authors note that incremental innovations provide project teams with explicit goals up front since the team is typically improving on a specific aspect of the product's performance. Because of this difference, goal clarity, while no less important for incremental innovations, is generally more tied to success for radical innovations. Project teams must have explicit, clear goals, and incremental innovations may naturally provide them; on the other hand, for radical innovations, well defined and established goals must be created.

Evidence from the exploratory study supports the theory that clearly defined goals help promote task cohesiveness. One company had very specific goals for the product and for the project team which clearly laid out each team member's duties. This helped the team to work together more effectively and to be more committed to the task because each team member knew what to expect from the others involved. Conversely, interviews with team members from another company suggested that

clear goals did not exist because one team member said that the team's goals were implied, whereas another team member said that separate goals existed for both individual team members and the team as a whole. This team was not unified around a clear set of goals, and their task cohesiveness suffered because they were committed to different or at least poorly defined goals.

P<sub>T1</sub>: Clearly defined goals within NPD teams positively influence task cohesiveness.

### *Goal Support*

While establishing a clear set of goals is important for an NPD team, the team must also support the goals set forth for an NPD project. Vision support implies that NPD team members and others within an organization are committed to achieving the established vision (Lynn and Akgün 2001). Lynn and Akgün (2001) relate vision to an NPD team's goals; therefore, vision support is essentially goal support. The commitment of the NPD team increases task cohesiveness because it allows the team to unite around the same goals, enabling them to better work together and achieve those said goals. This is further supported by McDonough (2000), who states that vision support indicates a willingness among team members to help accomplish their goal. Therefore, goal support is linked to task cohesiveness because it unites team members around a common objective. Goal support also leads to better NP performance, as supported by Lynn and Akgün (2001), who found that NP success was significantly associated with vision support.

The exploratory investigation suggests that goal support improves the team's task cohesiveness. One company had complete goals, but team members displayed widely varied levels of enthusiasm about the product and the project team to the extent that the team manager stated that the group members were not involved in idea generation and "Probably felt like it just got put in their lap." This team was not truly committed to the project and its goals beyond that required of its members because it was their job. Members from another team were very enthusiastic about the project as soon as work began on the project. Team members could see the product had lots of potential and were very committed to accomplishing their goals, which greatly enhanced their task cohesiveness. In addition, the members of this team became more committed to their task once they became aware of a distribution opportunity, even though this required that their timeline be shortened. Their goal support was so strong that they did not mind putting in extra hours in order for their product to have this special opportunity.

P<sub>T2</sub>: Goal support from NPD team members positively influences task cohesiveness.

### *Goal Stability*

Finally, for team goals to be effective they must be stable. If the vision or goals for a new product change frequently during the NPD process, team members will be disoriented (Lynn and Akgün 2001). While a project team should remain reasonably flexible during the product's development, the overall product goals should be stable throughout the process. Goal stability is especially important as an

issue for team members from different departments. Teams made up of cross-functional members are already grappling with unifying their different perspectives in order to create a successful new product. Cross-functional teams often face goal incongruity, which is defined by Xie, Song, and Stringfellow (2003, p. 234) as “The extent to which members of marketing, R&D, and manufacturing subscribe to different goals, use different decision criteria, and think differently about time.” When cross-functional team members subscribe to shared goals, the team will have greater task cohesiveness since its members can work more effectively together and be more committed to one set of goals. Furthermore, when the goals do not change or change very little over the course of the NPD process, the goal stability encourages greater task cohesiveness by reducing confusion and frustration and increasing the team members’ commitment to their task.

Evidence from the exploratory study supported the relationship between goal stability and task cohesiveness. Goals did not change throughout the development process for any of the products examined, though aspects of the product did in all cases. The stability of the team’s goals helped its members to focus their efforts toward their objectives and to be more committed to their goals and the team.

P<sub>T3</sub>: Goal stability during the NPD process positively influences task cohesiveness.

### **Organizational Issues**

The organizational environment in which NPD takes place influences the cohesiveness of the NPD team. As Cooper (1999) notes, project teams face a number

of environmental factors over which they have little control. Issues within an organization, including its emphasis on formalization and the synergy of NP projects, affect NPD teams, both how they work together and their enjoyment of the project. Therefore, organizational issues influence both task and interpersonal cohesiveness.

### *Synergy of Project*

The synergy of a project is defined by Danneels and Kleinschmidt (2001, p. 358) as “the extent to which the new product fits with the firm’s resources, skills, and capabilities.” Cooper (1999) notes that choosing the right projects is a critical success factor and that a firm’s ability to leverage internal competencies is one of the environmental characteristics that impacts this choice. A major factor that influences the synergy of NPD projects is the degree of radical-ness of the innovation. Incremental innovations are generally extensions or modifications to existing product offerings (McDermott and O’Connor 2002) and therefore will naturally be more synergistic because they build on or use existing skills and resources of the firm. Radical innovations, however, involve entirely new products, either for the company or the consumer, and therefore require new skills, resources, and technologies (McDermott and O’Connor 2002). Thus, radical innovations may not be synergistic because a firm may not possess the capabilities to meet these requirements. So, it has been established that project appropriateness is important to the success of NPD and the NPD team.

Concerning cohesiveness, if a project does not match the internally available resources that a firm has, a strain is placed on the NPD team. Team members will struggle to stay committed to a project and to work together if a project is above and beyond what they have the capability and resources to accomplish. Task cohesiveness, therefore, is improved if the project is synergistic but is negatively influenced if the project does not fit with the firm's capabilities, resources, and skills.

Interviews conducted during the exploratory study indicated that synergy of a project impacted the task cohesiveness of team members. One team's project was a perfect fit for the company because it used existing materials and was well within team members' skills and capabilities. It should be noted that this was an incremental project, which made it easier for team members since it did not require new or different skills and thought patterns. The team was committed to the project because the members could immediately see the potential of the product and the process of working to achieve their objectives was not particularly strenuous since it was well within their capabilities. Another team faced the opposite situation because its members were working on a project that was a completely new channel of distribution for the company. Therefore, the project required a high level of innovativeness for the company. This provided many challenges for team members as they tried to match the competition in the industry and as unanticipated problems arose in creating a product in a new channel. The team's task cohesiveness suffered because the work required of project members was somewhat different than what they had previously done.

P<sub>T4</sub>: Synergistic NPD projects positively influence task cohesiveness.

### *Organization Formalization*

The use of cross-functional teams often results in high levels of organization formalization. Leenders and Wierenga (2002, p. 309) describe formalization as “the emphasis in an organization on following rules and procedures.” Pinto et al. (1993) examined the impact of both organizational and project team rules and procedures and found that project team rules have a direct and significant impact on cooperation and task outcomes. However, they did not examine firms in which the use of cross-functional teams was the norm. Organization formalization can serve as a means to integrate different functional areas and to coordinate their activities (Pinto et al. 1993). Because formalization provides an NPD team with a more structured environment, it improves task cohesiveness by facilitating the team’s work so that its members can more easily achieve their objectives.

The exploratory study supports the positive relationship between organization formalization and task cohesiveness. Two teams studied had very formalized NPD processes. One team’s efforts were so structured that one team member stated that, “The whole team is very streamlined, everyone knows what their responsibilities are and all they’ve got to do is figure out their timelines. The team is a facilitator.” All team members are aware of precisely what needs to be done, and their task cohesiveness is improved because they are united around their commitment to accomplishing their task both individually and corporately. Another team also had a

formalized process involving regular bi-weekly meetings that went through a set agenda to discuss what had been done by each team member and any problems that had arisen, and the process followed the methods used for all of the company's NPD projects. Team members, therefore, possessed a shared commitment to the task because they knew what everyone on the team was contributing to the project and what to expect from the team experience in general.

P<sub>T5</sub>: Organization formalization positively influences task cohesiveness.

### **Cross-Functional Issues**

Differences in the discipline of team members have been examined in many studies to determine their influence on the outcomes of NPD projects (Ettlie 2002, Leenders and Wierenga 2002, Song and Parry 1997). Because NPD ultimately involves all functional areas in an organization, cross-functional relationships must be cooperative for NPD to be successful (Leenders and Wierenga 2002). All the differences in functional units are compounded in NPD teams because functional units must work together cooperatively and must simultaneously learn to leverage their different views (Adams et al. 1998). Therefore, cross-functional issues influence both the task and interpersonal cohesiveness of the NPD team because the extent of the differences among functional units impacts the team's ability to unite around a common goal and team members' enjoyment of the group.

### *Integration*

Many researchers (Leenders and Wierenga 2002, Xie et al. 2003) have noted the impact of integration on cross-functional teams. According to numerous studies (Pinto et al. 1993, Song and Parry 1997, Souder 1988), greater integration between marketing and research and development (R&D) leads to better new product performance. Integration has been labeled using many and varied terms including interaction, collaboration, communication, and cooperation (Kahn 1996, Leenders and Wierenga 2002, McDonough 2000, Pinto et al. 1993, Song and Parry 1997). While these individual terms do not completely capture the essence of integration, together they can serve to represent its different aspects, which impact how different functional areas relate to one another.

Kahn (1996) exclusively discussed interaction and collaboration, stating that these dimensions alone are insufficient to achieve integration. Kahn (1996) described cross-functional integration as “a multidimensional process that subsumes interaction and collaboration” because these dimensions alone are not sufficient. Therefore, integration goes beyond any exclusive dimension of the construct. He described collaboration as a “Mutual/shared process where two or more departments work together, have mutual understanding, have a common vision, share resources, and achieve collective goals.” At the most basic level, collaboration refers to the extent to which different departments work together on NPD projects. Kahn (1996) describes interaction as those cross-functional activities which are formally coordinated, such as regular meetings, conference calls, and the flow of standard documentation. This dimension therefore relates to how the team is formally structured in terms of the

NPD process that the organization utilizes and hence relates to task cohesiveness because it facilitates the accomplishment of goals. It also relates to interpersonal cohesiveness and will be described further with that model.

Communication is essential to an NPD team, and some researchers have conjectured that the frequency and quantity of communication creates successful integration of departments (Griffin and Hauser 1992, Ruekert and Walker 1987), while others emphasize that alone these elements are insufficient. Inter-functional cooperation refers to the extent and effectiveness of information sharing among functional areas (Xie, Song, & Stringfellow 2003, Olson et al. 2001). Olson et al. (2001) found that “higher levels of cooperation between functions generate stronger new product performance than do lower levels of cooperation.”

For the purposes of this study, the definition used is that by Song and Parry (1997, p. 5), who define cross-functional integration as “the level of unity of effort across functional units in developing and launching a new product.” Song and Parry (1997) found that cross-functional integration improved proficiency during the NPD process and improved the sharing of information and involvement across functional boundaries. Task cohesiveness is improved by better integration because improved collaboration, interaction, communication, and cooperation will help an NPD team to focus more intently on pursuing its goals and to be more committed to the project. Team members are able to work together more effectively when complete information is shared among departments, and when departments are in close contact, thus task cohesiveness is improved.

Evidence from the exploratory study indicated that integration improves task cohesiveness. For companies whose NPD teams were effectively integrated, the teams had a stronger commitment to their goals. Conversely, for NPD teams that were not as effectively integrated, the teams were not as united toward a common goal. One team had limited interaction because it had no formal meetings for everyone involved in the project, which hampered the team's ability to share a common goal. Other teams had a good deal of interaction from regular meetings, which helped unify the team around its goals. Collaboration helped a team's task cohesiveness because the different departments working together helped it to possess a shared commitment to the project. Cooperation and communication helped team's task cohesiveness because the information and ideas shared among departments helped emphasize achieving the project objectives. Evidence from the exploratory study suggested that those teams in which all departments' efforts were unified had greater task cohesiveness.

P<sub>T6</sub>: Integration of functional departments positively influences task cohesiveness.

### *Political Influence of One Department*

A common problem for cross-functional teams is unifying the perspectives of team members from various departments in the organization. Perspectives particularly differ between those who are part of R&D and engineers in the organization and the marketing department because their disciplines lead them to think differently and to have divergent ideas about time schedules (Bond et al. 2004,

Ettlie 2002, Leenders and Wierenga 2002, Olson et al. 2001). These different perspectives create problems for cross-functional integration because they lead to a lack of agreement among the different departments in an organization, which can consequently influence NPD success (Griffin and Hauser 1992). Furthermore, different departments often have a specialized language derived from their education and career experiences, which separates them from others in the organization (Bond and Houston 2003). These shared languages can create communication rifts, which must be overcome in order for the different departments of an organization to interact effectively and to learn from one another to create successful products (Bond and Houston 2003). These communication rifts in and of themselves can hamper task cohesion because functional units cannot work toward a common goal if they do not understand the terminology used to express the goals or ideas being pursued in an NPD project. On top of this strain another hindrance is sometimes added when a specific department is dominant within an organization. It is common for a business to become known for its strength in a specific discipline and to attract people who are talented in this area. However, an organization may develop a cultural bias toward this dominant discipline (Leonard-Barton 1992). When an organization has a preference towards a specific discipline, it may be giving this discipline greater political influence in the NPD process and in the NPD team. If NPD project team members perceive that another department and its ideas are considered to be more important than their department's, it greatly detracts from task cohesiveness. Team

members will lack desire to work together to pursue their objectives if the opinions of various team members are not given equal weight.

Evidence from the exploratory study suggested that when one department had more control of the NPD project, task cohesiveness suffered. Team members from one company felt constrained by the dominant department, which hampered their commitment to the task since they had less input in project decisions. Another team indicated that there was a “natural friction” that existed between the dominant department and other departments. Team members from this company were committed to the project as part of their job responsibility but had no additional commitment or association with the project.

P<sub>T7</sub>: Political influence of one department in NPD negatively influences task cohesiveness.

### *Empowerment*

While effective integration of functional units is important, it is also important for members to be empowered to make NPD project-related decisions (McDonough 2000). Team members become more committed to an NPD project and its goals when they are empowered to make decisions pertaining to the project. Leonard-Barton (1992, p. 116) defines empowerment as “the belief in the potential of every individual to contribute meaningfully to the task at hand and the relinquishment by organizational authority figures to that individual responsible for that contribution.” Many studies have found that project performance is improved when team members

are given greater responsibility in making project-related decisions (Donnellon 1993, Hershock et al. 1994, Thamhain 1990). Closely related to empowerment is ownership, which refers to team members feeling a deeper commitment so that they “begin to tie their identity to a project’s outcome, thus putting forth extra effort to ensure its success” (McDonough 2000, p. 227). Sethi and Nicholson (2001) note that project team members’ commitment causes them to pursue what is good for the project, rather than just what is good for their functional area, and they label this feeling as psychological ownership. Both empowerment and ownership impact the task cohesiveness of an NPD team by making team members more individually committed to the project and its goals. When team members feel that they have a stake in the project and a voice in the decisions being made, they are far more likely to be committed to their task. Though empowerment could also be an organizational issue, it is considered here since it deals mostly with cross-functional issues.

The exploratory study indicated that team members were more committed to the team’s goals when they were given responsibility for specific tasks. In all four teams involved in the study, tasks were “Divided up based on the discipline of whoever is on the team and they are responsible for completing it,” as one product manager said. The project manager also emphasized that while some tasks involved the whole team, other tasks were more specialized and that team members must trust each other to handle their responsibilities. Because the team members had specific roles in the NPD process, they were more committed to doing their work for the project.

P<sub>T8</sub>: Empowerment of team members positively influences task cohesiveness.

### **Mediators between Task Cohesiveness and NP Performance**

#### *Task Cohesiveness and Task-Related Conflict*

Task-related conflict is described by Jehn and Mannix (2001) as “an awareness of differences in viewpoints and opinions pertaining to a group task.” Task-related conflict can harm an NPD project when team members become too consumed with standing their ground when problems or issues arise and when they are unwilling to compromise their position. When a team is cohesive concerning their task, the group is better able to maintain focus on its objectives and to not get sidetracked by arguments and discussions, which can slow down the development effort. Discussions are relegated to those things that are truly important issues so that trivial disagreements are kept to a minimum. While disputes regarding the project may arise because of team members’ differing opinions, the NPD team’s shared agreement about the importance of their task will help to reduce this dissension. Therefore, when a team is task cohesive, their commitment to the task will keep conflicts in check so that the project is the focus of their efforts.

P<sub>T9</sub>: Task cohesiveness has a positive influence on task-related conflict.

#### *Task Related Conflict and NP Performance*

While too much conflict is negative, depending upon the extent and frequency of these disputes, task-related conflict can be beneficial for an NPD project team. The level of task-related conflict can affect the relationship between task

cohesiveness and NP performance. Jehn and Mannix (2001) found that moderate levels of task conflict were present during the midpoint of the group's task in high-performing groups but that, overall, high-performing groups had lower levels of conflict than did low-performing groups. Jehn and Mannix (2001) suggest that the generally low levels of conflict promote openness among group members and that they can then engage in beneficial task-related conflict at crucial points in the project without disagreements becoming personal in nature. Studies have suggested that task conflict enhances performance and decision making outcomes because it helps to unify different thought worlds and increases other departments' understanding of these differing perspectives (Amason and Schweiger 1994, Jehn and Mannix 2001, Schweiger et al. 1989, Schwenk 1990). Therefore, while there is evidence suggesting both positive and negative effects of task-related conflict, this study suggests that it positively influences NP performance because it aids in the leveraging of different functional perspectives to create a successful product.

Evidence from the exploratory study supports the positive effect of task-related conflict on NP performance. One team had open discussions about issues that arose during the NPD process and through everyone's input created a better product. During the team's regular updates, problems were addressed, and every team member was allowed to give his or her input on the topic. Through these discussions, the team members felt that they had a stronger end product because of everyone's meaningful participation.

P<sub>T10</sub>: Task-related conflict positively influences NP performance.

## *Moderating Influences on the Task-Related Conflict and the NP Performance*

### *Relationship*

*Norms Encouraging Openness and Disagreement:* One team from the exploratory study conducted a great deal of discussion about issues and problems but was unable to unify the differing perspectives of team members, and the product consequently suffered, which indicates that the relationship between task-related conflict and NP performance may be affected by moderating variables. Studies have found that norms fostering openness toward differing opinions help team members to focus on the benefits of this diversity instead of the harmful effects, thereby minimizing hurt feelings or negative attitudes (Jehn and Mannix 2001). Furthermore, groups with norms that encourage openness, playfulness and disagreement are believed to experience enhanced performance when they are interpersonally cohesive (Gully et al. 1995). Through the expression of diverse opinions, the NPD team may be able to identify issues that are critical for the project's success which may not have been immediately obvious. Therefore, group norms that encourage acceptance of differing opinions strengthen the relationship between task-related conflict and new product performance. Consequently, group norms that do not accept differing opinions weaken the relationship. One team from the exploratory study frequently observed issues arise, but team members were often hesitant to speak their true thoughts about the product or problem areas. Furthermore, when team members did speak their minds, they were often ignored or eventually overruled, causing them to

be less likely to contribute meaningfully in future discussions. As a result, team members felt that the product likely suffered from this decreased participation that was caused by a lack of openness.

P<sub>T11</sub>: Open norms strengthen the positive relationship between task-related conflict and NP performance.

*Type of Product:* For incremental products, task-related conflict may negatively impact performance because the short-term financial success of these products is based on efficiency in the NPD process. Incremental products involve a straightforward task because they involve modifications or extensions to the company's existing product line (McDermott and O'Connor 2002). Therefore, companies expect these products to be developed relatively quickly since the company has previous experience with similar products. Conflict would only slow down the project and therefore reduce the efficiency of the NPD process, thereby lowering the product's financial performance. Therefore, incremental products weaken the relationship between task-related conflict and new product performance. For one company from the exploratory study, their product was extremely straightforward and required very little discussion among team members. If members of the team had caused conflict over the task through lengthy discussions, the development of the product would have been significantly and unnecessarily lengthened. In turn, this would have led to the product not meeting its financial goals for the company.

P<sub>T12</sub>: Incremental products weaken the positive relationship between task-related conflict and NP performance.

For innovative products, some task-related conflict is necessary because the task is not as clear. Innovative products are generally unlike any of the existing products within a firm and require “New skills, levels of market understanding, leaps in new processing abilities, and systems throughout the organization” (McDermott and O’Connor 2002). Through the leveraging of different opinions and unique input, task-related conflict can aid the NPD team in identifying the best solutions for issues that arise during the NPD process. The relationship between task-related conflict and new product performance is therefore strengthened when the task is an innovative product. One team from the exploratory study entertained a great deal of discussion about its product and all its aspects because the product was in a new channel of distribution for the company. Therefore, more in-depth discussions were needed to ensure that steps in the NPD process were properly completed to ensure a successful product.

P<sub>T13</sub>: Innovative products strengthen the positive relationship between task-related conflict and NP performance.

#### *Task Cohesiveness and Increased Individual Effort*

In small group research task cohesiveness has been found to help team members to be more individually committed to their task and to put forth more individual effort (Craig and Kelly 1999). When team members have a shared

commitment to their task, they become more concerned about the ultimate performance of the group. Since group members are more focused on the group's output, they put forth more effort to ensure that the group succeeds. Therefore, the team's task cohesiveness helps to increase each group member's individual effort. Increased individual effort resulting from task cohesiveness is supported by evidence from the exploratory study. Most team members found that the commitment of the group helped them to work more intently on their contribution to the NPD project. One company from the exploratory study included team members who were very attracted to the project to which they had been assigned. As a result, team members were more than willing to put forth extra effort to guarantee that the project succeeded. Even when the team had to push up its deadlines, team members were willing to work harder to meet these deadlines because they felt that the project and its goals were worthwhile.

P<sub>T14</sub>: Task cohesiveness leads team members to increase their individual effort on NPD projects.

#### *Increased Individual Effort and NP Performance*

When all team members increase the effort put forth toward their contributions to the project, NP performance is improved because greater efforts are likely to lead to a more successful project. If team members' efforts are less than their best, it is likely that the product will suffer because it is not receiving the full attention it deserves. However, when team members put forth effort that is beyond their normal input into a team effort, it is likely that the product will be improved

through their attentiveness. This is supported by evidence from the interviews. One project team whose members put extra effort into the project ended up with a more successful product. Conversely, another team whose members were not giving the project their full efforts ended up with an acceptable but ultimately unsuccessful product.

P<sub>T15</sub>: Increased individual effort positively influences NP performance.

*Moderating Influences on Increased Individual Effort and NP Performance Relationship*

The type of task moderates the relationship between increased individual effort and new product performance. For additive tasks, meaning that the team's performance is dependent on each individual group member, increased effort is important because, if each team member is putting forth his or her best effort, the project benefits from everyone's labor. Additive tasks do not require cooperation or coordination among group members but instead contribute to the full project as one stand-alone component (Zaccaro and Lowe 1986). The final result is the sum of each individual part. More effort from each group member means a stronger project overall. According to Zaccaro and Lowe (1986), task cohesiveness is beneficial for the performance of any small group that is performing an additive task. Therefore, additive tasks strengthen the relationship between increased individual effort and performance. One team in the exploratory study had an additive task which mostly required separate inputs from each functional area. These team members put forth

extra effort toward their components because they wanted the project to meet its objectives; it ultimately did so and even surpassed company expectations.

P<sub>T16</sub>: Additive tasks strengthen the positive relationship between increased individual effort and NP performance.

For disjunctive tasks, meaning that the team's performance is based on the performance of the group's best member, increased effort is also important because greater effort from that determinant individual will improve the group's performance. Disjunctive tasks are "[Tasks] in which groups must adopt a single solution to the exclusion of all other solutions. Typically for the group to succeed, it is necessary for at least one group member to possess the ability to derive the correct solution" (Zaccaro and McCoy 1988). Disjunctive tasks, therefore, require that team members are accepting of the solution, and increased effort from each team member will aid the team as it works together on the project. If the team is putting forth extra effort, it is more likely that the problem will be solved because the determinant individual is encouraged and supported by his or her fellow team members and will consequently also put forth more individual effort.

P<sub>T17</sub>: Disjunctive tasks strengthen the positive relationship between increased individual effort and NP performance.

## **INTERPERSONAL COHESIVENESS**

### **Organizational Issues**

#### *Collectivism Culture*

One major factor that impacts how NPD team members interact is their company's organizational culture. According to Xie, Song, and Stringfellow (2003, p. 237), collectivists "view themselves primarily as members of groups, pursue group goals, and feel strong attachment to the group." A company with a collectivist or "clan" culture emphasizes teamwork and cooperation and wants workers to have a sense of family within and loyalty toward the company (Deshpandé et al. 1993, Xie, Song, and Stringfellow 2003). An NPD team working in an organization that promotes collectivism will likely hold these same values and seek not only to create a successful product but also to give team members a sense of personal satisfaction because collectivists place priority on developing human resources (Dehspandé et al. 1993). The sense of unity that a collectivism culture promotes helps create interpersonal cohesiveness because NPD team members who associate with their team are more likely to enjoy it and to be attracted to their project team.

Evidence from the exploratory study supports the proposition that a collectivist culture improves interpersonal cohesiveness. One company's corporate culture strongly emphasized the importance of all team members getting along and being very respectful of others. The NPD project team members at this company felt that this improved the team experience because the working environment was very positive and because there was limited conflict. One team member noted that when disagreements occur, there "Doesn't seem to be a lot of finger-pointing, it's more of addressing the problem and focusing on how to fix it." Because of the team's collectivist culture, team members enjoyed the project and the team experience.

P<sub>II</sub>: A collectivist culture positively influences interpersonal cohesiveness.

### *Organization Formalization*

While organization formalization is convenient because it provides the team with some structure and order, these rules can also inhibit the team and stifle new ideas and creativity (Damanpour 1991, Pierce 1977). Studies have shown that low formalization permits openness, which encourages new ideas and behavior from team members (Damanpour 1991, Pierce 1977). A high degree of formalization could cause a project team to become less of a team and more of an NP machine because interaction among team members is kept strictly to a minimum in order to maintain efficiency and to focus on the task at hand. When an NPD process is facilitated by a large number of rules and procedures which do not factor into the interaction of team members, the NP team is not afforded the opportunity to become attached to or to enjoy the group. Formalization lessens interpersonal cohesiveness because it detracts from the team members' ability to get to know one another in a more open, informal environment.

The exploratory study provided evidence that organization formalization reduced interpersonal cohesiveness. One company examined had a very formalized process, to the extent that limited interaction was required among team members. Therefore, team members did not really become attached to the team because they were focused on completing their portion of the task, comprised of an individual activity. Another company examined also had a formalized NPD project, and team

members were not strongly attracted to the team because their team efforts consisted of fulfilling a functional responsibility instead of a collaborative effort.

P<sub>12</sub>: Organization formalization negatively influences interpersonal cohesiveness.

## **Cross-Functional Issues**

### *Integration*

Kahn's (1996) description of interaction as formally coordinated cross-functional activities relates to interpersonal cohesiveness because it describes interaction in terms of how departments communicate. Leenders and Wierenga (2002) found that integrating mechanisms such as informal social systems, the use of email and other Internet technologies, and the location of physical facilities impact the extent to which departments are integrated. According to their study, organizations can find a balance among these different mechanisms in order to maintain successful integration of functional areas. According to Sethi and Nicholson (2001), the greater the potential for formal and informal communications among different departments, the greater the chances of a team exhibiting charged behavior. The authors describe charged behavior as including the dimensions of enjoyment and cooperation which relate directly to interpersonal cohesiveness because team members are attracted to and are enjoying the team effort. When departments communicate frequently both formally and informally, interpersonal cohesiveness is improved. The physical proximity of departments also impacts an NPD team's ability to communicate. In some organizations, functional areas may be separated by

something as small as floors of an office building or by something as large as departments in different geographic locations. Leenders and Wierenga (2002) found that the relationship between integration and physical proximity was strong; therefore, integration is improved with less physical distance among departments. However, if functional areas are isolated with no formally coordinated cross-functional activities and little informal communication, interpersonal cohesiveness suffers because NPD team members are not given an opportunity to enjoy working as a team.

In a study by Souder (1988), lack of interaction between marketing and R&D personnel in the form of meetings, mostly due to neglect and the departments not seeing a need for close interaction, caused mild disharmony between the departments. Projects in this study by Souder (1988) that experienced mild disharmony had only partial success as compared to projects that experienced harmony and mostly succeeded. Xie, Song, and Stringfellow (2003) found that the harmony of cross-functional relationships was an important component of successful integration and that more harmonious relationships caused team members to be willing to overcome functional barriers in order to accomplish their objectives. Therefore, interpersonal cohesion is improved through more harmonious cross-functional relationships because the way employees interact is enhanced and strengthened. Interpersonal cohesiveness is also improved by better integration primarily through a more positive work environment and because more opportunities to enjoy and to become attached to the group arise through increased communication and interaction.

Evidence from the exploratory study supports the relationship between integration of functional departments and interpersonal cohesiveness. One company had regular formal meetings, which helped team members to be more attracted to the team because they were aware of their team member's individual tasks and accomplishments throughout the project. Another company had regular formal meetings via video conferencing because the company's functional departments were in different geographic locations, which caused team members to be less attracted to the team. The integration of departments was not very strong since they were geographically separated, and this eliminated essentially all informal communication, which lessened the interpersonal cohesiveness of the team. Another company noted that there was some friction among functional departments, which lessened interpersonal cohesiveness because team members tended to be more attracted to their own department than the team as a whole because the departments were not very integrated.

P<sub>13</sub>: Integration of functional departments positively influences interpersonal cohesiveness.

#### *Political Influence of One Department*

The level of political influence that a department has can cause those NPD team members who are from a less influential department to feel that their ideas are of less value to the team and can cause them to feel less attracted to the group. Communication barriers, due to specialized functional languages and varying levels

of influence, can also hamper team members' enjoyment of the team if working together is a struggle to understand and to be understood. When one department has greater political influence it can also affect the harmony of cross-functional relationships. Xie, Song, and Stringfellow (2003, p. 235) describe cross-functional harmony as "The extent to which departments maintain effective cooperative associations with one another." Cooperative associations among departments are strained when departments are not perceived as being equal. According to Souder (1987), cross-functional disharmony has a deprecating effect on NPD success rates because 68 percent of projects conducted in an environment of severe disharmony failed. Disharmony among departments because of differing levels of political influence negatively impacts interpersonal cohesiveness. Team members' enjoyment of project teams is severely lessened when their department has less clout than another or when a strained relationship exists among the different functional areas of the organization.

The exploratory investigation supports that the negative political influence of one department is detrimental to interpersonal cohesiveness. One product manager noted that "There is always a struggle when marketing is basically calling the shots...perhaps there was some resentment that marketing was more powerful in this discussion than perhaps in other companies." The team members not only viewed marketing as the driving force of the project but felt that marketing had more influence in project decisions. The interpersonal cohesiveness of this team was

lessened because team members were more attracted to their individual departments than to the team itself since they had less of a voice in project decisions.

P<sub>14</sub>: Political influence of one department in NPD negatively influences interpersonal cohesiveness.

### **Mediators between Interpersonal Cohesiveness and NP Performance**

#### *Interpersonal Cohesiveness and Group Think*

When group members get along well and experience enjoyable personal interactions with fellow team members, they often are afraid of destroying this rapport. This strong desire to preserve harmony among group members often leads to group think, which occurs when “The drive for concurrence becomes more important than the thorough and honest evaluation of alternatives; group members view a matter from only one perspective (Mann and Putnam 1990, p.109).” When group think occurs team members tend to avoid voicing dissenting opinions and simply follow what the majority believes is the right course of action. This causes issues and problems within the NPD process that will not be fully evaluated or potentially not even addressed because group members are more interested in preserving the group’s cohesiveness. Group think is similar to conflict harmonization, which occurs when group members “Resolve conflicts within a relationship without consulting other outside parties (Ayers et al. 1997, p. 109).” When conflict harmonization exists in high levels within a team, it can cause a team to be driven by consensus and to avoid responding to external objections (Ayers et al. 1997). A team that is very close

personally may be more inclined to address issues that arise during NPD within the group rather than to seek advice from others in the company.

P<sub>15</sub>: Interpersonal cohesiveness has a positive influence on group think.

#### *Group Think and NP Performance*

Group think harms NP performance because problems or issues are unaddressed or not fully examined due to team members' unwillingness to express differing opinions. Problems that arise during the NPD process may go unacknowledged, though it may be imperative that they are addressed. Group think can also lead to only one solution to a problem being examined, whereas the project may require that several solutions be evaluated and that the best solution be implemented. Considering group think from a conflict harmonization perspective, NP performance is harmed because the team avoids seeking any external input which may have proven beneficial to the development effort. The need for consensus among group members may occur at points in the development effort that could benefit from more thorough discussion and differing opinions on the topic. Because group think leads to problems not being fully addressed or evaluated, it harms new product performance.

P<sub>16</sub>: Group think/conflict harmonization negatively impact NP performance.

#### *Moderating Influences on the Group Think and NP Performance Relationship*

*Open Norms*: Because open norms encourage group members to voice their opinions, group think is lessened when the team fosters openness. When team members are allowed to express their opinions and concerns regardless of what the

rest of the group believes, it eases their fears of destroying the cohesiveness of the group. Open norms help prevent group think from influencing the performance of the group, yet still allow the team to get along. Conflict harmonization is also lessened because team members are free to suggest pursuing outside advice on issues that arise during the NPD process. Openness helps to create an atmosphere in which group members are comfortable stating their opinions without fearing that they are injuring other group members' feelings or destroying the closeness of the team.

P<sub>17</sub>: Open norms weaken the negative relationship between group think and NP performance.

*Type of Product:* The type of product also moderates the relationship between group think and NP performance. Tasks that are very straightforward weaken the negative relationship between group think and NP performance. Less discussion of different ideas and approaches is needed with incremental products, and steps in the NPD process are often skipped because they are unnecessary since companies have prior knowledge regarding the task (Song and Montoya-Weiss 1998). The nature of group think leads to little or no conflict among group members because they are interested in maintaining harmony within the team. Therefore, the product is able to go through the NPD process more quickly, which helps the product to achieve more successful short-term financial performance. Conflict harmonization is also not as much of an issue for incremental products since the company already has related experience. Therefore, it is more likely that team members can effectively solve issues within the group without needing much outside assistance.

P<sub>18</sub>: Incremental products weaken the negative relationship between group think and NP performance.

Innovative products require that problems with the product are recognized and addressed appropriately in order for the product to succeed. Since group think hampers group members' ability to state new or opposing ideas, problems often go unaddressed. Therefore, an innovative product's performance suffers because the product or process by which it is made has not been fully examined, leading the team's effort to be one that is less than the best that the company can provide.

Conflict harmonization is also harmful for innovative products because it compels group members to have a high need for consensus and to be generally unable to solve all problems that arise within the team. Innovative products require that issues be examined from multiple perspectives and that each perspective is examined so that better decisions about the product are made. Furthermore, innovative products often necessitate the development of new technologies, markets, or infrastructures (Song and Montoya-Weiss 1998), which require even greater participation from NPD team members. Also, because innovative products are new either for the company or for the consumer, they often require that outside assistance be sought, whether from others within the company or even from outside the company. Therefore, conflict harmonization inhibits the development of innovative products and decreases the likelihood of the product being a success.

P<sub>19</sub>: Innovative products strengthen the negative relationship between group think and NP performance.

### *Interpersonal Cohesiveness and Superordinate Identity*

When team members are attracted to the group and enjoy the team effort, they tend to identify with their project team. Superordinate identity refers specifically to “The extent to which members identify with the team (rather than merely with their functional areas) and perceive a stake in the success of the team” (Sethi, Smith, and Park 2001, p. 75). Group members who are linked to the team through personal bonds are more likely to have a personally vested interest in the team and its success beyond simply doing their job. Functional departments within companies are often very separated in terms of thought patterns, and an interpersonally cohesive team helps members to feel that they are part of a specific project team rather than just fulfilling a functional responsibility in an NPD effort.

Evidence from the exploratory study supports the positive influence of interpersonal cohesiveness on superordinate identity. Most project members who were interviewed believed that team members identified more strongly with their functional departments than with their teams. One product manager noted that team members were not evaluated by him, so in that sense they associated more with their department, but he also noted that “There was never any waver of loyalty to the project; they gave 100% to it.” The product manager also noted that team members tended to get much personal satisfaction and took personal pride in their work on specific NPD teams. The members of this team got along very well with one another, and this seemed to help team members to feel more connected to the group and its

efforts. Another product manager noted that it was hard for team members to identify with the team since they were in different geographic locations, which also created more general problems in terms of the interpersonal cohesiveness of the team.

P<sub>110</sub>: Interpersonal cohesiveness has a positive influence on superordinate identity.

#### *Superordinate Identity and NP Performance*

Superordinate identity helps NPD teams to unify around their tasks because team members step beyond their functional areas to become part of a project team. Team members are better able to accept differing opinions when they identify with the team instead of just their department. The division among functional departments can be detrimental to team efforts because team members tend to view issues only from their functional perspective. As Sethi, Smith, and Park (2001, p. 75) note, “Unless functional identities are replaced by a sense of team identity, it may be difficult for members in a team to discover critical novel linkages among diverse perspectives.” Superordinate identity helps team members to focus more on similarities with other team members rather than differences resulting from functional biases (Sethi, Smith, and Park 2001). Therefore, superordinate identity helps the team members to leverage their different functional perspectives to create a more successful product because they feel connected to the team and to the project’s success, which leads them to be more open to diverse opinions.

P<sub>111</sub>: Superordinate identity has a positive influence on NP performance.

#### *Interpersonal Cohesiveness and Distraction from Task*

When group members get along very well, the social aspect of the group can sometimes overwhelm the focus on the task at hand, and as a result the group becomes a social group rather than a work team. This leads groups to become distracted from their tasks. Distraction from task can happen much more easily as a team's size increases because group members may not be contributing a unique component to the group or because the group may just become unmanageable to some extent (Karau and Williams 1993). This can result in social loafing, which is "The reduction in motivation and effort when individuals work collectively compared with when they work individually or coactively (Karau and Williams 1993, p.681)." Social loafing therefore occurs when team members believe that participating in a group means that less individual work is required from them. Liden et al. (2004) note that social loafing occurs when "Consciously or unconsciously, due to the decrease in social awareness that can occur in group settings, individuals may not exert as much effort in group settings as when they are alone." Groups that maintain close personal ties may be less formal about assigning tasks to specific individuals, or team members may feel that, because members are on friendly terms, they will not be supervised closely and that it is therefore acceptable to put less effort into a project. Evidence from the exploratory study supported the relationship between interpersonal cohesiveness and distraction from task. One product manager noted that he preferred to have "a barebones amount of people on [his] teams" because otherwise it was hard to come to a consensus about decisions. He felt that a large project team often

became unmanageable and that consequently there was less focus on the task because people became sidetracked by arguments or relationships with fellow team members.

P<sub>112</sub>: Interpersonal cohesiveness has a positive influence on distraction from task.

#### *Distraction from Task and NP Performance*

When team members are distracted from their task, the most obvious consequence is that they lose their focus on the project and its objectives. Furthermore, social loafing leads group members to expend less effort towards the project and to be potentially dependent on other group members to do the work. This results in less deliberate individual effort going into developing the product, which in turn harms the performance of that product. When a product is getting less attention from the team, whether because team members are distracted by socialization or because team members have a lackadaisical attitude toward the project since it is a team effort, the product is much more likely to fail because problems are likely to go unnoticed.

P<sub>113</sub>: Distraction from task has a negative influence on NP performance.

#### *Moderating Influences on the Distraction from Task and NP Performance*

##### *Relationship*

*High Performance Goals:* High performance goals help focus the team's efforts because they provide the team with specific objectives for the product and its performance. Furthermore, high goals require that all team members give their best efforts so that the goals can be achieved. This helps to combat distraction from task and social loafing because it gives the group very well-defined guidelines for its

performance. Seashore (1954) found that cohesiveness improved performance for groups with high performance goals by creating more uniformity in the productivity of members; cohesiveness harmed groups with low performance goals who were uniformly less productive. Therefore, high performance goals improve performance by providing a structure within which the team operates. When an NPD project has high performance goals, team members do not have the flexibility to shirk their responsibilities or to expect others to compensate for the deficiencies in their work. Team members must exert full effort into the project, or they are not likely to meet their objectives.

P<sub>I14</sub>: High performance goals weaken the negative relationship between distraction from task and NP performance.

## **Discussion**

This study serves primarily to lay the groundwork for a quantitative study. The models presented in this study serve to distinguish between the types of cohesiveness which are affected by different aspects of the work environment and which consequently have different effects on the NPD process and NP performance. Each link from both the task and interpersonal cohesiveness models can be further examined and tested empirically. Through an empirical study, the impact and significance of the antecedents and consequences of the two types of cohesiveness could be measured.

In addition, the effects of both types of cohesiveness on an innovativeness outcome could be studied and tested since different determinants exist for NP innovativeness. Innovativeness outcomes are distinct from performance outcomes because a firm may be seeking to grow and to expand its reach into new areas (Danneels and Kleinschmidt 2001). So a firm may pursue an NPD effort with the goal of being very innovative while having a separate goal with regards to the product's performance. Because innovative products require the inputs of people from a variety of disciplines within a firm, it is worthwhile to investigate the impact of cohesiveness on these work teams. A study by Thamain (1990) found that task, people, and organizational-related variables impacted innovative performance and suggested that "The effective manager of an innovation-oriented work team is usually a social architect who understands the interaction of organizational and behavioral variables and can foster a climate of active participation and minimal dysfunctional conflict." Therefore, both task and interpersonal cohesiveness can have a significant effect on innovativeness outcomes because they impact the team during the NPD process. Furthermore, different influences and mediators affect the cohesiveness and innovativeness relationship. Consequently, it would be worthwhile to explore the implications of the relationship between both types of cohesiveness and innovativeness.

This study also has implications for managers involved in the NPD process. Both task and interpersonal cohesiveness should be considered in terms of their impact on work teams in the business world instead of being considered applicable

only to group theory. Both types of cohesiveness affect the NPD process and performance in different ways. Managers must therefore pay attention not only to the way project team members relate to one another as coworkers but also to their commitment and attraction to the task at hand. Furthermore, this study shows that a single project design is not necessarily sufficient because with every project and every unique group of individuals comes a new set of challenges. Because of this, managers should carefully consider the many variables that comprise a specific project, such as the type of task, the goals for the project, and group norms which impact how the team will function. For some companies a more set project design may be appropriate, but for others the dynamic nature of projects and work teams implies the need to cater the design to the individual project. Formats for project teams need not be drastically different, but instead should seek to acknowledge and address the unique needs of the product being developed and the team assembled to achieve these goals. Ultimately, a better understanding of both task and interpersonal cohesiveness will help managers to improve the effectiveness and performance of their NPD teams.

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