

**THE DYNAMICS OF GROUP DEVELOPMENT AND TEAM DECISION MAKING**

*by*

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***ABSTRACT:***

The following thesis integrates the dynamics of group development with those of group decision making. Existing frameworks on group development are reviewed and a comprehensive model of group development is proposed. This comprehensive model draws on existing models such as Tuckman's sequential Forming, Norming, Storming, Performing framework as well as non-sequential models by Gersick and routinized models by Gersick and Hackman.

The group decision making process, its steps, its challenges, and techniques developed to surmount those challenges are presented. Finally, the dynamic process of group development is integrated with that of group decision making.

It is posed that groups wrestle with specific types of issues at each stage of development. When these group issues are congruent with the decisions which the group must make, decision making is swift and efficient. When the group must make a decision not congruent with its current developmental stage, decision making can be very laborious and difficult. It is under these circumstances that process facilitation and outside intervention can be most effective.

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## **1.0 INTRODUCTION**

### **1.1 Problem Statement**

As work spreads across functional boundaries and responsibility is given to the bottom of the hierarchy, teams have taken on an ever increasing role in today's organizations. Much has been learned over the past 30 years about the dynamics of group development. This paper will examine three of the leading theories of group development: Tuckman's sequential model of Forming, Storming, Norming, and Performing, Gersick's non-sequential model of Punctuated Equilibria, and Gersick and Hackman's models on Routinization. These models will be examined, compared and contrasted and a comprehensive, cyclical model of group development will be presented.

Throughout their group development, teams, in an effort to complete their tasks, must make numerous decisions. This team decision making process is among the most important processes which teams exhibit. Research into the challenges of team decision making, as well as potential solutions to these challenging issues will be presented in order to help managers facilitate the group decision making process.

Finally, the group development process and the group decision making process will be integrated. It will become apparent that these two processes are linked to a considerable degree. Teams exhibit affinities and aversions to specific types of decisions at each of the various stages of their development. When a decision is congruent with the team's developmental stage, the decisions making process is usually efficient and swift. Conversely, when a decision is incongruent with the team's developmental stage, conflict may arise. A model depicting which type of decisions are congruent with each stage, and each cycle, of a team's development will be presented. In addition, decision making techniques which can facilitate decisions incongruent with the team's development will be discussed.



## **1.2 Overview of approach used to address problem**

The paper relies heavily on past research into group development and group decision making. Numerous, at times mutually exclusive explanations of the group development process are presented and reconciled throughout the paper. The second section of the paper discusses data collection methods. Section 3 discusses sequential, non-sequential, and routinized group development. A comprehensive model of group development is also presented in section 3. Section 4 discusses the various steps in group decisions making along with the challenges which group decision making presents. Finally, some group decision making techniques are presented which can be used to facilitate group decision making and overcome some of the group decision making challenges. Section 5 integrates the group decision making and the group development process. A model is developed which poses that teams have affinity for certain types of decisions during each of their stages and cycles of development. This model is helpful in anticipating and diagnosing potential conflicts within groups which may arise when a team is asked to make a decision about an issue incongruent with their current stage of development.

## **2.0 DATA COLLECTION METHODS**

### **2.1 Description of data collection methods**

Three distinct forms of data collection were employed. The initial impetus for this work came from first hand experiences with teams and team decision making by the author in both new product development and process consultation environments. These experience sparked a desire to research tools which could aid the decision making process in groups. A review of relevant existing literature into the areas of group development and group decision making was employed to understand past art. Finally, selected interviews with practitioners in the field of decision making facilitation helped to test the practicality of some of the proposed theories.

### **2.2 Justification for use of these methods**

It is not the aim of this research to uncover new patterns of group development or to develop new decision making processes. Therefore, little first hand research was undertaken. It was much more important to understand the existing art on the subject and to integrate this art into a coherent whole. For this reason, considerable research into previously published material was undertaken. Unfortunately, such research can become rather antiseptic as one becomes detached from real world techniques in decision making. Interviews views with practicing process facilitators at Synectics, CSC/Index, and Pittiglio Rabin Todd and McGrath help to bring the research back down to earth.

## **3.0 RESULTS AND ANALYSIS**

### **3.1 Team development Models**

#### ***3.1.1 Sequential models (Tuckman)***

Perhaps the most well known model of the stages of team growth remains the Tuckman model. When he first published this model in 1965, Tuckman proposed that teams go through fairly predictable stages as they mature. He labeled these four stages: Forming, Storming, Norming, and Performing.<sup>1</sup>

##### **3.1.1.1 Stage 1: Forming**

In the Forming stage, the group members attempt to define the scope of their project. The members may engage in abstract discussions of goals, concepts and issues as well as attempts to isolate the relevant problems. They will make an effort to define the tasks which need to be accomplished and decide on what information must be gathered to complete these tasks. Such discussions may lead to complaints about the organization and barriers to the task. Along with the task oriented discussions, the group members will attempt to determine the boundaries of acceptable group behavior and how to deal with group problems. In effect, participants transition from individual to team member status in this stage. They may also test, formally or informally, the leader's guidance skills.

Group members experience feelings of excitement and pride about being chosen for the project and quickly form a tentative attachment to the team. However, they may

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<sup>1</sup>Tuckman, Bruce W.; "Developmental Sequence in Small Groups" (Psychological Bulletin, 1965, Vol 63, No. 6) pg. 384-399

also experience suspicion, fear, and anxiety about the job ahead. Because there are so many issues distracting team members from their goal, little of substance is accomplished in this early stage.<sup>2</sup> Once the team begins to dive into the actual tasks, they progress to Stage 2: the Storming stage.

### **3.1.1.2 Stage 2: Storming**

This has been called the most difficult stage of the team's development.<sup>3</sup> It is the stage at which team members realize that their understanding of the problem is incomplete. Before the team comes to this understanding, however, there is considerable arguing among team members - even when they agree on the real issues. Defensiveness, competition, and the establishment of a perceived pecking order dominate the discussions as many of the team members attempt to impose their own ideas, from their own frame of reference, on the others. There is a general resistance toward collaboration with other team members. This results in increased tension and often jealousy.<sup>4</sup>

The group members may be experiencing feelings of frustration as they attempt to resist those approaches which differ from what individual members are comfortable using. This general disharmony results in sharp fluctuations in the individual member's attitude about the team and the project's chance of success. Like in the Forming stage, team members are preoccupied with non-task oriented issues; resulting in little progress towards completion of the task. However, team members are beginning to understand one another thereby opening the door to stage 3: the Norming stage.

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<sup>2</sup> Scholtes, Peter R.; The Team Handbook, How to Use Teams to Improve Quality, (Joiner Associates, Madison WI, 1988) pg. 6-4

<sup>3</sup> *ibid*, pg. 6-5

<sup>4</sup> Tuckman, Bruce W.; "Developmental Sequence in Small Groups;" (Psychological Bulletin, 1965, Vol. 63, No. 6) pg. 386, 396

### **3.1.1.3 Stage 3: Norming**

Having gained an understanding of one another through their struggles in the Storming stage, team members are now able to establish team norms with which all members are willing to abide.<sup>5</sup> Team members accept the team, their roles in the team, the individuality of fellow members and the norms to which they have actively or tacitly agreed. Team members now seek to maintain harmony and establish a common spirit and goals.

Team members may feel an new ability to express criticism constructively as well as an acceptance of membership in the team and the responsibilities associated with this membership. As competitive relationships become more cooperative, emotional conflict is reduced and the team is poised to start making significant progress.<sup>6</sup>

### **3.1.1.4 Stage 4: Performing**

The establishment of team norms has allowed the team to settle its relationships and expectations. Team members are now able to prevent or work through group problems. The team is now ready to fully diagnose problems and implement change in an open, constructive atmosphere.<sup>7</sup>

Team members may have strong feelings of attachment to the team. Since members have discovered and accepted each others strengths and weaknesses the atmosphere changes from one of competition and conflict to cooperation. The team has become an effective, cohesive unit and the members are feeling satisfied with the team's progress at this point.

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<sup>5</sup> Scholtes, Peter R.; The Team Handbook, How to Use Teams to Improve Quality; (Joiner Associates, 1988, Madison WI) pg. 6-6 to 6-7

<sup>6</sup> Tuckman, Bruce W.; "Developmental Sequence in Small Groups;" (Psychological Bulletin, 1965, Vol. 63, No. 6) pg. 386-387

<sup>7</sup> Tuckman, Bruce W.; "Developmental Sequence in Small Groups;" (Psychological Bulletin, 1965, Vol. 63, No. 6) pg. 387

The duration and intensity of these stages vary from team to team and not every team goes through every stage; some teams may never progress to the performing stage. Other teams may go from forming to performing in a single meeting. Tuckman pays little attention to what triggers a transition from one stage to the next. One is left with the feeling that this transition occurs automatically, in its own time. It is likely that the team's external environment (its relationship to outsiders, its successes and failures etc.) will significantly impact transitions from one stage to the next.

### *3.1.2 Non-Sequential Models (Gersick)*

Tuckman's model broke new ground in that it imputed structure to the team development process. Tuckman believed that this structure was sequential in nature, that teams normally progress through the first three stages in order to reach the performing stage. In the late 1980's, Connie Gersick published research suggesting that group progress was triggered more by members' awareness of time and deadlines rather than by the completion of an absolute amount of work in any given developmental stage.<sup>8</sup> The model she proposes, and others like it, are termed non-sequential models.

By studying eight actual field teams ranging in existence from 7 days to 6 months, Gersick found that "the sequence that teams went through differed radically across groups. Moreover, activities and issues that most theories described as sequential progressions, were in some cases fully simultaneous or reversed."<sup>9</sup> Gersick teams revealed that each group immediately established an integrated framework of performance strategies and interaction patterns. This finding contradicts the traditional sequential models of Tuckman and others, which pose that teams begin with a discrete

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<sup>8</sup> Gersick, Connie J. G.; "Time and Transition in Work Teams, Towards a New Model of Group Development;" (Academy of Management Journal, March 1988) pg. 9

<sup>9</sup> *ibid*, pg. 12

stage of indeterminate length during which they orient themselves towards their problems, explicitly debating and choosing what to do.

In addition, each team's approach to their task, their team and their authority figures varied wildly.<sup>10</sup> Though each team began with the formation of a framework, each framework was unique. While some teams began with harmonious internal interaction patterns, others' were stormy. And, while some teams were preoccupied with the views of their authority figures, others ignored them. These findings also contradict the traditional stage theory paradigm in which it is assumed that all teams essentially begin with the same approach towards their task, their team and their authority figures.

Gersick research leads group development theory in a new direction. She proposes that group development can be thought of as a "punctuated equilibrium." This paradigm entails:

1. An initial set of approaches: Phase 1
2. At the calendar midpoint, an opportunity to reevaluate the initial framework
3. A second inertial (that is unchangeable) approach which emerges from the midpoint transition: Phase 2
4. A project completion period<sup>11</sup>

### **3.1.2.1 Phase 1:**

In phase 1 groups define most of the parameters of their situation quickly and examine them no further. They concentrate on only a few factors. This is in direct contrast to the sequential models (Tuckman et. al.) which pose that a group takes time to

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<sup>10</sup> Gersick, Connie J. G.; "Time and Transition in Work Teams, Towards a New Model of Group Development;" (Academy of Management Journal, March 1988) pg. 13

<sup>11</sup> Gersick, Connie, J.G.; "Time and Transition in Work Teams, Toward a New Model of Group Development;" (Academy of Management Journal, March 1988) pg. 16-17

evaluate and choose alternatives. It is possible that Gersick's focus on teams of relatively short duration (6 months or less) imparts a sense of urgency to these teams which Tuckman's teams did not sense. Such time pressure may force Gersick's teams to spend less time evaluating alternatives and more time implementing adequate (as opposed to optimal) solutions. Since current management teams tend to be under extreme time pressure, Gersick's model seems extremely relevant to this research.

Perhaps due to this time pressure, Gersick's teams develop a framework of behavioral patterns and assumptions through which they approach their task in the very first meeting. The group stays with this approach throughout the first half of its life. Gersick suggests that the sheer speed with which these early patterns emerge suggests that they are strongly influenced by assumptions the group members have about the task and about each other prior to convening for the first time.<sup>12</sup> Members' individual expectations bound the interactions which take place during the first meeting.

### **3.1.2.2 The Calendar Midpoint:**

At their calendar midpoints, groups experience transitions - "paradigmatic shifts in their approaches to their work" - enabling them to take advantage of the gradual learning they have done and make significant advances. This midpoint presents a powerful opportunity for teams to alter their course; once the midpoint is past, this opportunity may not reemerge. Gersick proposes that this transition occurs at the midpoint because teams pace themselves in their use of time in order to finish by their deadlines. The midpoint "appears to work as an alarm clock, heightening the members' awareness that time is limited, stimulating them to compare where they are with where

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<sup>12</sup> Gersick, Connie, J.G.; "Time and Transition in Work Teams, Toward a New Model of Group Development," (Academy of Management Journal, March 1988) pg. 33



they need to be and to adjust their progress accordingly." <sup>13</sup> This indicates that the midpoint is an "opportunity for, not a guarantee or progress." <sup>14</sup>

The midpoint is a unique time in the team's existence. It is the only time when

- 1) the members are experienced enough with the work to understand the contextual requirements,
- 2) have used up enough of their time and realize they must move on, and
- 3) still have enough time left to make significant changes.<sup>15</sup>

### **3.1.2.3 Phase 2:**

After the midpoint, a second period of inertia sets in. The approach for this phase of the team's existence emerges from plans crystallized during the transition. The assumptions made at this stage will probably not be questioned again, reinforcing the fleeting opportunity which the midpoint provides.

### **3.1.2.4 The Deadline:**

At completion when a team makes a final effort to satisfy outside stakeholders, it experiences the positive and negative consequences of its past decisions.

Thus while the developmental stage paradigm of Tuckman et. al. focuses on the stages themselves rather than on the process of change, Gersick's punctuated equilibrium paradigm focuses on periods of stability and on change processes. Gersick's model suggests that the initial meeting (and the expectations group members bring into this first meeting) is even more important than Tuckman has pointed out. It is at this meeting that

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<sup>13</sup> Gersick, Connie, J.G.; "Time and Transition in Work Teams, Toward a New Model of Group Development;" (Academy of Management Journal, March 1988) pg. 34

<sup>14</sup> *ibid*, pg. 34

<sup>15</sup> *ibid*, pg. 35

the initial approach is determined, this approach is unlikely to be reconsidered until half of the team's time has been used up. The model also suggests that the team does not necessarily need to make visible progress with a steady stream of decisions in Phase 1, rather the team must "generate the raw material to make a successful transition."<sup>16</sup> The importance of the midpoint from the team's perspective has already been discussed. This midpoint is also of import to external managers; it may be the best opportunity to renew communication: the team is ready to reevaluate its approach, it is open to new information and looking for a new direction. Once this midpoint is past, the most helpful interactions tend to be those which help the team to carry out its work smoothly.

### ***3.1.3 Routinization (Hackman, Gersick)***

Hackman and Gersick bring a third perspective to the team development process. They propose that team development has little to do with discreet stages and is only loosely connected to punctuated equilibria. Hackman and Gersick contend that a high percentage of what groups do is governed by routines and that these routines can bound the group's development. Yet, since it is the nature of routines to go unnoticed, group members talk much less about the things they do routinely than about extraordinary actions they may have taken. In this covert way, routines (defined as actions taken without consideration of alternatives) begin to determine a group's responses. Thus, teams do not progress through stages of development as they "mature", nor do they proceed from inertia to transition; they establish routines which become more and more entrenched over time. These routines may have functional as well as dysfunctional consequences.

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<sup>16</sup> Gersick, Connie, J. G.; "Time and Transition in Work Teams, Toward a New Model of Group Development;" (Academy of Management Journal, March 1988) pg. 37

### 3.1.3.1 What is a Habitual Routine:

Hackman and Gersick define a habitual routine as:

A habitual routine exists when a group repeatedly exhibits a functionally similar pattern of behavior in a given stimulus situation without explicitly selecting it over alternative ways of behaving.<sup>17</sup>

Perhaps the two most striking elements of this definition are that it must occur "in a given stimulus situation" and "without explicitly selecting it over alternative ways of behaving." Because the behavior pattern must occur "in a given stimulus situation" the behavior pattern is exhibited in response to a bounded class of stimuli. This perception or coding of stimuli is a key precursor of habitual behavior. Stimuli coding is a complicated and problematic task. A group with well established routines may quickly code a new stimuli to fall into an established class of stimuli without giving explicit attention to the new stimuli. Thus the team may not recognize a new stimuli which requires a non routine response. In addition, the group's coding of the stimuli that elicits a habitual response may be accomplished without specific group discussion or even awareness. In this way, routines become automatic conditioned responses.

Thus we see that habitual responses are a short cut for the team to get from stimulus to action. Habitual routines exist without engaging group members' conscious attention, evaluation or choice; they are automatic. In addition, habitual routines preserve and perpetuate existing patterns of behavior; they are self-sustaining.

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<sup>17</sup> Gersick, Connie J.G. and Hackman, J. Richard; "Habitual Routines in Task-Performing Groups;" (Organizational Behavior and Human Decision Processes, 1990, Vol. 47) pg. 69

### **3.1.3.2 Functional Consequences:**

Because they do not have to be actively managed, habitual routines save time and energy for the group. A group can move quickly beyond stimulus coding activities. This should allow members to improve efficiency when familiar responses are called for, allowing team members to concentrate on non routine challenges.<sup>18</sup> This is reminiscent of Tuckman's Norming and Performing distinction. Once a pattern has been established, the team's acceptance of the pattern is taken for granted and is not reevaluated. In addition to efficiency, a well learned routine increases the level of comfort group members have, increasing their confidence about their roles in the group.

### **3.1.3.3 Dysfunctional Consequences:**

There are two main dysfunctional consequences of habitual routines. First, performance can slip as members miscode novel performance situations. If the stimulus is novel and the group fails to recognize it as such, invoking an old habitual routine, the response may not be optimal.<sup>19</sup> Alternatively, the stimulus may be correctly identified but the surrounding situations have changed. Failure to adjust to the new surroundings will again result in sub-optimal solutions<sup>20</sup> (this may be especially prevalent in groups which have been very successful in the past - they are less likely to change to a new environment).

Second, habitual routines can reduce the innovative performance process ultimately leading to stagnation of the group. Because behaviors in the group are being executed mostly automatically, there are diminished opportunities for members (and the

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<sup>18</sup> Gersick, Connie J.G., and Hackman, J. Richard; "Habitual Routines in Task Performing Groups;" (Organizational Behavior and Human Decision Processes, 1990, Vol. 47) pg. 70

<sup>19</sup> *ibid*, pg. 72

<sup>20</sup> *ibid*, pg. 72-73

group as a whole) to grow in competence, skill or perspective. In a very significant way, habitual routines can determine the development of a group.

#### **3.1.3.4 Development and Maintenance of Habitual Routines in Groups:**

With habitual routines playing such a powerful role in group development, an examination of the origin and maintenance of habitual routines is in order. Gersick and Hackman describe three conceptually distinct ways in which groups can get into habitual patterns: by importing them, by creating them early in life, and by gradually evolving them over time.<sup>21</sup> Imported habitual routines are not developed by the group members. Nevertheless, members know how they are supposed to operate, and they proceed to act in those ways.<sup>22</sup> An example of an imported habitual routine is a standard operating procedure for which the group member are routinely trained. In effect, a norm is imported and the absence of miscues and disagreements implicitly affirms that all members accept it.

Habitual routines that are created differ from imported routines in that patterns are created which are new and particular to this group. However, much like the imported routines, created routines are established very early in the life of the group and are established very quickly with little or no time to actually evaluate the suitability of the routine. Whatever is on the table at the team's first meeting, may be particularly important in setting the early directions of a group. The strong influence of the first meeting is reminiscent of the "inertia" prevalent in Phase 1 of Gersick's non-sequential model of group development. It can also be contrasted to Tuckman's ideas that teams evolve slowly, over time, in set stages of development.

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<sup>21</sup> Gersick, Connie J.G., and Hackman, J. Richard; "Habitual Routines in task-Performing Groups" (Organizational Behavior and Human Decision Processes, 1990, Vol. 47) pg. 75

<sup>22</sup> *ibid*, pg. 75

Habitual routines can also evolve incrementally over time as group members gain experience with their tasks. Thus, routines can be consciously chosen; as team members gradually learn what responses are successful, the successful behaviors are reinforced. Yet it is also possible for patterns to evolve of which the group is not conscious. Members may simply fall into a routine accidentally - for instance post meeting coffee breaks. Such "accidentally evolved" routines tend to be less central to the group's life and thus (if necessary) more easily changed.

### **3.1.3.5 The Maintenance of Habitual Routines:**

Gersick and Hackman pose that, "habitual routines, once established, persist more or less automatically until and unless something specific happens to break a group out of its routine."<sup>23</sup> This is reminiscent of Gersick's idea that inertia develops within a group's processes and that something must jar the group in order to overcome the pent up inertia. Five different occasions offering the possibility that a group will abandon or replace its existing routines are discussed by Gersick and Hackman:

- 1) encountering a novel state of affairs
- 2) experiencing a failure
- 3) reaching a milestone
- 4) receiving an intervention that calls the attention to the group's norms
- 5) having to cope with a change in the structure of the group itself.<sup>24</sup>

Each of these five occasion involve a change in how the context is perceived. This new insight allows/forces the group to reconsider its *modus operandi*.

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<sup>23</sup> Gersick, Connie J.G., and Hackman, J. Richard; "Habitual Routines in Task-Performing Groups" (Organizational Behavior and human Decision Processes, 1990, Vol. 47) pg. 80

<sup>24</sup> Gersick, Connie J.G., and Hackman, J. Richard; "Habitual Routines in task-Performing Groups" (Organizational Behavior and Human Decision Processes, 1990, Vol. 47) pg. 80-83

The impetus for change is not enough to predict whether a group will alter its routines. The timing of the change and the extent to which the routine is embedded in the group's life are equally important. Gersick and Hackman cite research indicating the start of the group, the midpoint of the life cycle (see Gersick's non sequential model above), and other major times of transition are favorable times for initiating, revising, or replacing habitual routines. This is when the most uncertainty exists, when groups may be most willing to consider a fresh perspective.

Even if the impetus for change exists and the timing is right, routines may still be too central to the group's life to be given up. Gersick and Hackman suggest that the more the routine is central to the group's primary task, and the more it is oriented towards socioemotional issues (as opposed to task issues), the more difficult the routine will be to change.

Thus we have yet a third model of how groups develop. The routinization model poses that groups seek efficiency and comfort and that routines fulfill these needs. As groups develop, their routines become better established and more difficult to change. Nevertheless, opportunities for changing the routines do exist if the right set of circumstances are present.

### **3.2 A Comprehensive Model of Team Development:**

Each of the models discussed above contains elements of truth, none is complete. While Tuckman's stages appear to resemble the development paths of some teams, others, like those studied by Gersick do not follow such a linear path. And while some teams move from one inertial state through a transition and into another inertial state, other teams continually redefine their goals, their processes and their dynamics by adjusting, or

even replacing their habitual routines. Thus team development is not as linear as either of the first two models would have us think, yet it has more underlying structure than simply its routines.

### ***3.2.1 The Cyclical Process of Team Development:***

Team development is a cyclical process during which teams move through Tuckman-like stages, develop routines and, from time to time, reevaluate those routines opening the door to a second cycle through Tuckman's stages. During these transition from one cycle to the next, when teams are reevaluating their assumptions, goals and routines, the inertia of the initial approach is broken and some teams are able to define a new approach more in line with their (new) challenges and/or their (new) environment.

The first cycle through Tuckman's stages can be very short. Gersick has described a number of teams who emerge from their initial meeting with a clear set of goals, with roles defined and agreed to by all, and with an approach, a framework, firmly in place. Some teams will take considerably longer to reach the Performing stage. They may struggle with goal definition, task delegation, role designation, norm creation, or implementation issues. Other teams may never reach the Performing stage at all; they may get irrevocably stuck in the turmoil of an earlier stage. Such differences in the pace at which teams mature may be due to the member mix of the individual teams or to environmental issues such as unclear tasks or rewards. Those teams that do make it through the first cycle from Forming to Performing will be implementing solutions to their goals within a relatively broad framework established as the team developed.



### ***3.2.2 Frameworks, Routines and the Cycles of Team Development:***

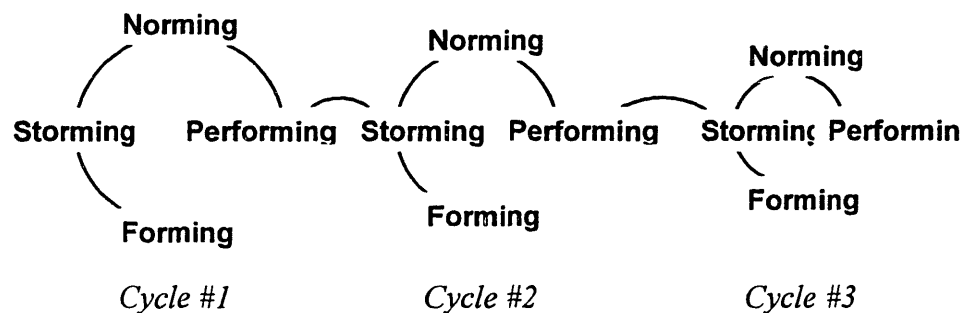
Each of the teams, regardless of when or whether they reach the Performing stage will quickly established some habitual routines (imported or created) and it will evolve other routines in time. At the end of their first cycle, teams have established both functional and dysfunctional routines. However, since these routines are not deeply entrenched, teams may be more open to other approaches, other possibilities, and other frameworks at this point than they will after these routines become more deeply entrenched. Thus the team's first cycle helps to establish their goals and their framework. These goals may change over time. The framework the team employs will be broad during the first cycle and the team will be more open to adjusting this framework after their first cycle than they will be in the future. The first cycle also establishes the initial routines which the team will use to speed decision making and help define the individual's roles. These routines will become more entrenched and therefore more difficult to change over time.

Some teams who reach the performing stage will have the opportunity to reinvent themselves again. Such a reinvention could be triggered by anyone of the five "Opportunities for transition" discussed by Gersick and Hackman. These opportunities will force many teams to reevaluate their goals, their roles, or their approach; in effect throwing the team into a Storming or possibly a Norming stage of a second cycle. If the team concludes that it is necessary and possible to adjust its framework and if the routines are not too entrenched, the team may use this opportunity to redefine itself emerging yet again into an new Performing stage. This new stay in the Performing stage should prove to be more productive than the last since the team has presumably applied the learning it has done from its first cycle through its stages of development. However, the routines have become more entrenched and the framework has become more specific, thus the team is less open to new information, and less willing to take a non-routinized approach in its second cycle than it was in its first. This second cycle may not be the team's last;

given another opportunity, the team may go through another transition beginning another cycle.

The model may look something like this:

**Figure 1: The Multiple Cycles of Team Development**



### ***3.2.3 The Implications of Multiple Transitions on Group Effectiveness:***

It should be pointed out that subsequent cycles through developmental stages, while potentially very productive, will be more difficult for the team to embark on. This is not only because most teams are under time pressure and will not have the luxury to spend time reevaluating rather than implementing, but also because team members and their routines will be more difficult to change as time goes on. Team members who have been through a potentially divisive transition once have had to adjust their framework of the team's goals, its approach, and their roles. Adjusting this framework again at a later time will force the team to admit it did not completely solve its original issues. While

some teams will be able to face this reality, others will not, therefore making a second transition (and thus a third cycle) less likely than the first. In addition, routines which have been evolving over time are becoming more entrenched and thus more difficult to change. This is not to say that they cannot be altered, but it will be more difficult to change them a second time. More extreme conditions may be required to bring about this second change.

The possibility that teams will be able to incorporate past learning into subsequent cycles opens the intriguing possibility that teams who are courageous enough to transition more than once will perform better than those who do not. Those teams who transition again and again are adapting their framework to new realities. This flexibility allows such teams to find a more optimal solution. Perhaps it is desirable to create opportunities for transition for longer term teams. Such opportunities, when seized, may lead to better performing teams.

While teams that transition multiple times may be adapting their framework more often and may therefore be able to develop more optimal solutions, it is also possible that teams that have transitioned a number of times have very entrenched routines and a very narrow focus. The routines have become more entrenched for two reasons:

- 1) older teams have repeated their routines more often than younger teams
- 2) older teams are more likely to have transitioned than younger teams; the turmoil of transitioning will have presented the team with opportunities to adjust its routines. While some of these routines may have been adjusted; those which were not adjusted have survived and been strengthened by the transitioning process.

These deeply entrenched routines may make a team less likely to seek out new approaches. Thus, while teams that transition multiple times may be developing more optimal solutions to specific problems, their routines may be so entrenched that they no

longer see the larger picture. Teams that transition multiple times run the risk of becoming narrow in focus.

## **4.0 Team Decision Making**

While teams are usually completely unaware of the group development process they are undergoing, their group decision making process is often painfully obvious. The disharmony often associated with the group decision making process is overshadowed by its benefits. The broader information base that a group brings to the decision making process is only one advantage of the team decision making approach. Team decision making also increases information flow within the company. This tends to link the activities of upstream and downstream functional organizational more tightly together. The feedback that such a system generates allows the firm to locate and solve problems earlier so they can be corrected before they become too costly. Finally, group decision making facilitates management's assessment of key individuals within the firm. By increasing contact between various hierarchical layers, upper management can gain a better understanding of the strengths and weaknesses of its employees. Group decision making increases communication within the firm, coordination across functional departments, and information on the skills and competencies of key employees.<sup>25</sup>

### **4.1 Steps in group decision making**

In addition to the advantages of group decision making mentioned above, the various points of view held by individual members of the team make reaching a decision inherently more difficult than traditional "top down" decision making systems. In order to maximize the effectiveness of the group decision making process, four key steps must be considered:

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<sup>25</sup> Ancona, Deborah G.; "Note on Group Decision Making" (unpublished MIT Sloan School note) pg. 1-2

- 1) The group identifies the problem or opportunity.
- 2) The group analyzes the problem.
- 3) The group proposes and evaluates the solutions.
- 4) The group comes to a decision and takes steps to implement this decision.<sup>26</sup>

#### ***4.1.1 Problem Definition and Analysis:***

Too often teams do not spend enough time "up front," in steps one and two, to clearly understand their problem. By taking care to correctly identify and analyze the problem, teams will assure that they are not simply affecting the symptoms rather than the underlying problems themselves. A second pitfall of the problem definition and analysis stages relates to self-imposed information gathering. The opportunity cost of gathering additional information can be every high. In addition, time pressures may force decision makers to spend as little time as possible in the tedious information gathering phases. This often results in what has been called "satisficing:" the decision maker chooses to implement the first solution which satisfactorily measures against some global criterion.<sup>27,28</sup> The decision maker may choose to implement rather than examine other available alternatives. The resulting decision could be less than optimal. Time spent in the beginning to make sure the entire group understands the true problem is often returned several fold in the implementation stage.

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<sup>26</sup> Ancona, Deborah G.; "Note on Group Decision Making" (unpublished MIT Sloan School note) pg. 2

<sup>27</sup> Hatvany, Nina G., and Gladstein, Deborah; "A Perspective on Group Decision Making;" ( Managing Organizations, Readings and Cases, Nadler, David A., Tushman, Michael L., and Hatvany, Nina G. editors, 1982, Little Brown and Company, Boston MA) pg. 215

<sup>28</sup> Hatvany, Nina G.; "Decision Making: Managers and Cognitive Models;" ( Managing Organizations, Readings and Cases, Nadler, David A., Tushman, Michael L., and Hatvany, Nina G. editors, 1982, Little Brown and Company, Boston MA) pg. 23

#### ***4.1.2 Evaluation of Alternatives:***

Before the actual decision is made towards the end of step 3, the various alternatives must be evaluated. We have already discussed how the high opportunity cost of acquiring information combined with time pressures leads to satisficing by decision makers. Satisficing not only leads to insufficient examination of alternatives, it also results in insufficient attention to what set of desirable outcomes should be maximized (and what set of desirable outcomes should be compromised).

A second pitfall of the evaluation phase is the tendency for an individual or group to avoid reevaluating their own preferences in the light of new information. The most obvious way to do this is to selectively avoid information that contradicts a preferred course of action.<sup>29</sup> Thus a team which is about to make a decision on whether or not to add a given feature to a new product, may consider numerous reports about the usefulness of such a feature but ignore market data deeming the feature irrelevant. This may lead to an inability to reevaluate personal preferences in the light of new information of unforeseen consequences.

In addition, the momentum which is associated with finally making the decision should not be underestimated. Once a choice is made, commitment to this choice tends to be difficult to overcome since group members have spent considerable time and effort hammering out a suitable alternative. A solution which has been agreed to will be evaluated highly even in the light of new evidence that suggest the evaluation should be lowered.<sup>30</sup> It is important to delay the final decision making until all alternatives have been thoroughly examined.

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<sup>29</sup> Hatvany, Nina G.; "Decision Making: Managers and Cognitive Models;" (Managing Organizations, Readings and Cases, Nadler, David A., Tushman, Michael L., and Hatvany, Nina G. editors, 1982, Little Brown and Company, Boston MA) pg. 24

<sup>30</sup> *ibid*, pg. 25

#### ***4.1.3 Probability Estimates in Decision Making:***

Estimates of probable outcomes among alternative courses of action will be a part of any formal decision making process. It will quickly become apparent that the probabilities the team assigns to any given set of outcomes can significantly influence their final decision. If, for instance, the team decides that one alternative A has a 90% chance of success whereas alternative B has only a 65% chance of success, all else being equal, the team is very likely to choose alternative A. Unfortunately, these estimates of probability are not as unbiased as one would hope; at least three heuristics are at work to corrupt the probability estimation.

The first of these has been called the "representativeness heuristic." This heuristic has much in common with standard stereotyping phenomena wherein we employ representative assumptions about an actor based on a prejudged stereotype of the actor.<sup>31</sup> Thus we may think that the quiet man who has just requested a loan from our bank is more likely to be a librarian than a rock musician. We have made a causal link between his demeanor and his profession. We have decided that we have enough data to reach our conclusion and we make a decision on the available data because we believe we know much more than we actually do. Such confidence skews estimates of probability.

A second pitfall in probability estimation pertains to the "availability heuristic." This heuristic is illustrated by the fact that events which come or could be brought to mind more easily are often deemed more likely or probable than those that do not.<sup>32</sup>

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<sup>31</sup> Hatvany, Nina G.; "Decision Making: Managers and Cognitive Models;" (Managing Organizations, Readings and Cases, Nadler, David A., Tushman, Michael L., and Hatvany, Nina G. editors, 1982, Little Brown and Company, Boston MA) pg. 26

<sup>32</sup> *ibid*, pg. 26



Frequency or probability are assumed to be directly given by availability. The classic example of this heuristic is illustrated by the following question: "Are there more English words that begin with the letter r than have r as the third letter? (after Hatvany)<sup>33</sup>" If one answers "yes" one has used the availability heuristic; it is much easier to think of words which begin with the letter r than to think of words which have r as their third letter. In fact, there are far fewer words that begin with r.

A third heuristic which can skew probability estimation is the "anchoring heuristic." When making estimates, one uses a natural starting point as a first approximation, or anchor, for the estimate. This anchor is adjusted as one reaches the final estimate, but the adjustment is usually insufficient.<sup>34</sup> Thus one does not sufficiently factor new information into ones decision making process. If our initial estimate is too low, chances are our final estimate, even after we have seen all the data, will also be too low. Likewise, if our initial estimate were too high, our final estimate would probably also be too high.

The representativeness, availability, and anchoring heuristic should be kept in mind by teams during the probability estimation phase of the decision making process. awareness of these pitfalls may lead teams to make more careful probability estimates.

#### ***4.1.4 Coming to a Decision:***

A number of techniques have been developed to facilitate the actual process of decision making. They will be presented below. It should be kept in mind, however, that in idea generation and evaluation not every possible outcome can be evaluated. Not

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<sup>33</sup> Hatvany, Nina G.; "Decision Making: Managers and Cognitive Models;" (Managing Organizations, Readings and Cases, Nadler, David A., Tushman, Michael L., and Hatvany, Nina G. editors, 1982, Little Brown and Company, Boston MA) pg. 27

<sup>34</sup> *ibid*, pg. 27

every possibly contingency can be estimated and the validity and truth of every causal assumption cannot be examined. At some point, the manager must choose to ignore novel information. Nevertheless, idea generation and evaluation remains central to the group decision making process. Research has indicated that alternative solutions are best generated in an open atmosphere that is free from social pressure and criticism. It has also been shown that teams generate more ideas when their members first work independently to generate solutions. When these individually developed solutions are shared with the other team members new trains of thought are triggered in the other team members and creativity is enhanced thereby maximizing the solutions generated.

## **4.2 Unique Problems of Group Decision Making:**

We have discussed above, both the steps and the inherent difficulties associated with making decisions. The issues discussed above are equally applicable to individuals and to groups. There are, however, some problems associated solely with group decision making. This section seeks to highlight such issues.

### ***4.2.1 Unconscious and Conscious Mechanisms:***

The various viewpoints held by individual members of the team may, when not openly discussed, lead to feelings of hostility which get communicated indirectly, through conflict. If such interactions reflect personal disagreements rather than substantive discussions of alternatives, then the decision making process may be unconsciously affected in a negative way.

Some agendas, however, are quite conscious. A particularly vocal group member may attempt to sway other towards his agenda rather than the team's overall goal or mandate. Manipulation of others is easier the more ambiguous the decision. There is reason to believe that if group members do not share a commitment to a clear

organizational mission, group decisions may be the result of bargaining among members with parochial priorities.<sup>35</sup>

Examples of both conscious and unconscious mechanisms leading to ineffective group behavior abound. For example, a team's lack of organization may lead to inefficient use of the team's time. Strict conformity to group norms and pre-established roles can result in lower flexibility and decreased effectiveness in dealing with diverse problems. Systematic bias in information may exist because the group has not gathered information objectively. Such systematic biased will lead to sub optimal solutions as significant criteria are left out of the solution generation and evaluation phase.

Perhaps the most famous example of the inherent inadequacies of group decision making is reflected in "Group think." One illustration of this phenomenon, the Bay of Pigs fiasco, has been analyzed by Janis (1971). He found that "as the group became more cohesive, the group members became more loyal to one another and felt greater compulsion to avoid creating dissension."<sup>36</sup> The non-deliberate suppression of critical thoughts on the part of group members led to a break down in the decision making process resulting in a number of sub optimal decisions. The "group think" process illustrates a breakdown in all phases of decision making: insufficient information is gathered resulting in a biased pool of information, new information is avoided and rejected, and alternatives are not fully evaluated.

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<sup>35</sup> Hatvany, Nina G., and Gladstein, Deborah; "A Perspective on Group Decision Making;" ( Managing Organizations, Readings and Cases, Nadler, David A., Tushman, Michael L., and Hatvany, Nina G. editors, 1982, Little Brown and Company, Boston MA) pg. 217

<sup>36</sup> Hatvany, Nina G., and Gladstein, Deborah; "A Perspective on Group Decision Making;" ( Managing Organizations, Readings and Cases, Nadler, David A., Tushman, Michael L., and Hatvany, Nina G. editors, 1982, Little Brown and Company, Boston MA) pg. 218

#### ***4.2.2 Alleviating the Problems Inherent in Group Decision Making:***

As revealed above, the phases of problem definition, alternative generation, and choice are more complex at the group level than at the individual level because the group must coordinate diverse points of view and aggregate disparate information. Research indicates that most group decision making problems can be reduced by focusing on methodologies to upgrade the quality of information gathered for problem definition and alternative generation, and by providing a scheme by which to evaluate alternatives.

Problem definition can be most dramatically improved by allowing group members to openly express their expectations as to the function of the group. Such open discussion will lead to consensus on the groups goals which will prove an invaluable framework for all future decisions. Only after agreement on the goals has been reached can groups effectively plot out the more tactical aspects of their problem.

Once the problem is defined and the group is ready to analyze their situation, some up front time spent organizing their approach is of significant benefit (E Schein). As Hackman and Morris reported in 1975, among groups working on complex and uncertain tasks, those who took time in the beginning to discuss how to carry out the tasks prior to doing them performed better than those who did not.<sup>37</sup> The organization of the decision making process can be expanded to include agendas at meetings to establish priorities for each specific phase of the decision.

Once in the solution generation and evaluation mode, research indicates that these two tasks should be separated by having the group members first generate solutions together delaying the evaluation task until no more solutions are being generated. This allows the maximum number of ideas to be up for consideration. In addition, Hoffman (1979) proposes that it is beneficial to have group members first work on a problem

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<sup>37</sup> Hatvany, Nina G., and Gladstein, Deborah; "A Perspective on Group Decision Making;" ( Managing Organizations, Readings and Cases, Nadler, David A., Tushman, Michael L., and Hatvany, Nina G. editors, 1982, Little Brown and Company, Boston MA) pg. 219

individually and then in the whole group. Preliminary work by individuals presumably lessens the possibility of a potentially good idea being subjected to majority pressure before it has been fully articulated.

We will see various aspects of these solutions to the inherent problems of group decision making in the decision making techniques discussed below.

## **4.3 Methodologies**

### ***4.3.1 Brainstorming***

The import of considering a broad range of options before a solution is chosen has been mentioned above. Brainstorming is a particularly powerful (and fun) approach to generating such a list of options. The standard brainstorming process has four steps:

- 1) Define the subject of the brainstorming session. This is often done in question form: How can we improve xyz? What are we going to do about ...?
- 2) Give everyone a few minutes of silence to individually think about the question.
- 3) Invite everyone to call out their ideas. This process could be very regimented (going in a specific order and making sure everyone has a chance to speak) or very free flowing, depending on the dynamics which exist within the team at a given time.
- 4) One member of the team should write down all ideas on a flip chart without questioning the content of any idea.<sup>38</sup>

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<sup>38</sup> Scholtes, Peter R.; The Team Handbook, How to Use Teams to Improve Quality, (Joiner Associates, Madison WI, 1988) pg. 2-37 to 2-39

When all ideas have been exhausted, the team will be left with a flip chart full of options. This process often opens up new avenues of thought as new approaches are developed from the options presented.

#### ***4.3.2 Consensus mapping***

This technique is particularly effective in helping the team agree on the problem they are solving or on the scope of their work. Each team member is asked to write down key dimensions of the problem as s/he sees it on individual post-it notes. Members then cluster the post-it notes on a wall according to theme. The group then discusses the classification scheme and modifies this scheme until there is some agreement as to how to present the problem at hand in all its complexity.<sup>39</sup>

#### ***4.3.3 Nominal Group Technique (NGT)***

The Nominal Group Technique is a more structured approach to generating a list of ideas and narrowing this list down. It is called "nominal" because the members of the group do not interact as much as they normally would in a real team; for this reason, NGT may be useful in situations where team members are new to each other. NGT is really a formalized brainstorming session followed by a solution selection session. It is comprised of seven steps:

- 1) Silent idea generation
- 2) Round-robin recording of ideas in terse phrases on a flip chart
- 3) Adding new ideas and building on the ideas of others
- 4) Formally discussing each idea for clarification of pros and cons

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<sup>39</sup> Ancona, Deborah G.; "Note on Group Decision Making" (unpublished MIT Sloan School note) pg. 9

5) Preliminary voting to cut the options down. This can be quite regimented. Each group members is given a number of index cards in proportion with the number of items on the list (for lists of less than 20 items, team members are given 4 cards, 20-35 item lists require 6 index cards, 35-50 item lists entail 8 cards). Members make their initial selection by writing down one option on each card. The cards are then ordered according to preference and all team member's preferences are tallied on the master list.

6) The items which end up with the highest point total make it through the first cut and are now discussed further by the team.

7) A final ranking is made (procedure similar to step 5) and the item with the highest point total becomes the team's decision.<sup>40</sup>

#### ***4.3.4 Dialogue***

Unlike the techniques to aid decision making discussed above, Dialogue is normally not a one time event; rather, it is a process which a team decides to undertake in order to both develop as a team and make better decision. Dialogue triggers transitions in group development similar to those mentioned in Section 3, in addition, it alleviates the inherent difficulties in group decision making noted in Sections 4.0 to 4.2. William Isaacs, the director of the Dialogue Project at MIT's Organizational Learning Center, has described Dialogue as "a discipline of collective thinking and inquiry, a process for transforming the quality of conversation and, in particular, the thinking that lies beneath it." <sup>41</sup>

Dialog seeks to have people learn to think together, not just to in analyzing a given problem but in the sense of surfacing fundamental assumptions and gaining insight into why they arise. Isaacs proposes that the world view which one person holds, the filter through which s/he views the world, can be significantly different from the world view held by others. Thus there are many different "tacit programs" in motion and in

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<sup>40</sup> Ancona, Deborah G.; "Note on Group Decision Making" (unpublished MIT Sloan School note) pg. 10

<sup>41</sup> Isaacs, William N.; "Taking Flight: Dialogue, Collective Thinking, and Organizational Learning;" (Organizational Dynamics, Autumn 1993, American Management Association Vol. 22, No. 2) pg. 25

conflict. Since people tend to defend their world view, particularly under conditions of threat or embarrassment, conversations can often be likened to two ships passing in the night: no bond is established, no true communication is initiated, problem solving is superficial at best. It is only when group members learn to see how others are thinking and feeling about a critical issue and when group members learn to inquire about the nature of the assumptions behind their thinking that they can establish a common formulation of the problem. Such a common formulation allows group members to see one another's assumptions as valid (though they may not necessarily agree) and part of a single system.<sup>42</sup>

E. Schein has proposed a framework for getting Dialogue started. He cautions that the group must first understand the "essence" of Dialogue to begin the initial conversations. Schein suggests that helping the group to gain this understanding can best be done by asking members of the group to link Dialogue to other experiences which group members may have had in which they had a sense of real communication. He proposes the following approach:

- 1) Organize the physical space into a circle to create a sense of equality.
- 2) Introduce the general concept of Dialogue and ask everyone to think about an experience of dialogue in the sense of "good communication" in their past.
- 3) Ask everyone to share with their neighbor what the experience was and to think about characteristics of that experience.
- 4) Ask group members to share what it was about such past experiences that made for good communication and write these characteristics on a flip chart.
- 5) Ask the group to reflect upon these characteristics by having each person, in turn, talk about his/her reactions to the list.

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<sup>42</sup> Isaacs, William N.; "Taking Flight: Dialogue, Collective Thinking, and Organizational Learning;" (Organization Dynamics, Autumn 1993, American Management Association Vol. 22, No. 2) pg. 30-38



- 6) Let the conversation flow naturally once everyone has commented (this may require up to one and one half to two hours).
- 7) Have the facilitator intervene as necessary to clarify or elucidate using concepts and data that illustrate the problems of communication.
- 8) Close the session by asking everyone to comment in whatever way they choose.<sup>43</sup>

Once a group has been introduced to the Dialogue process in this manner, future Dialogue sessions (perhaps one per week) can be used to establish a common formulation of the issue to be decided. Once the entire group has such a common formulation, substantive decisions can be made.

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<sup>43</sup> Schein, Edgar H.; "On Dialogue, Culture, and Organizational Learning" (Organizational Dynamics, Autumn 1993, American Management Association, Vol. 22, No. 2) pg. 44-45

## **5.0 Dynamics of Group Development and Group Decision Making**

### **5.1 Team Development and Decision Making:**

In Section 3, several different models of group development were defined and a comprehensive model was developed. In Section 4, various steps, challenges, and techniques for group decision making were discussed. In this section, we seek to integrate the developmental stage and cycle in which a team finds itself with its ability to make group decisions. We will find that certain types of decisions will be easier for a team to make during some developmental cycles while other decisions will be easier during subsequent cycles or stages. When a match exists between the teams developmental stage and the type of decision which the team faces, the decision making will be smooth and efficient. However, if the team is faced with a decision which is not congruent with its development, conflicts may arise and the team could be thrown into turmoil. It is in these tumultuous situations that the team decision making techniques described towards the end of section 4 are most useful.

### **5.2 Dimensions of Team Development, the First Cycle:**

As was presented in Section 4, team development is a cyclical process (see Figure 1). Teams move through Tuckman-like stages as they develop towards ever more efficient performers of their chosen tasks. In the process, they develop routines which both simplify their work and invite inappropriate reactions to novel situations. Just when the team has become comfortable with its process, any one of Gersick and Hackman's "trigger events" may push the team to reevaluate either its routines or its approach. The team may not react at all to a given trigger event, but, if the timing is right and the routines are not too severely entrenched, the group may use this opportunity to redefine

its roles, its norms, or its tasks and embark on a second cycle through its developmental stages.

In the first cycle during the initial Forming stage, the team struggles with broad issues of scope and goal definition. Here the team is most open to new information, is willing to consider alternate viewpoints, and is hoping to come to a common understanding of the purpose for the particular team. In this Forming stage, the team is marked by a focus on broad, strategic issues ("*what* should this team do?") and is generally information oriented (rather than people oriented).

Once the scope and goals have been defined, the team generally moves to a more personnel oriented stage, the Storming stage. Here the team is establishing roles and positions along the pecking order for the individual team members. While the concerns remain strategic ("*what* should this individual do for this team?"), the focus has shifted away from unbiased information gathering and has taken on a more interpersonal focus (it matters who you are not what information you may bring).

The definition of roles allows the team to move into the Norming stage. Here team members are concerned about team process norms. The focus of this stage is less strategic than that of either of the earlier stages. The focus has become tactical ("*How* will we handle this event?"). In addition, there is a strong interpersonal element to this stage as individual preferences are taken into account.

Having focused on the interpersonal aspects of the team in the Storming and the Norming stage, the team is now ready to return to a task, or information focus as it enters the Performing stage. As the team struggles with completing its tasks, it becomes focused on the facts of the situation and on what information it needs to complete its task. This task and information focus is coupled with a focus on tactical issues ("*How* do we get this done).

Thus we see that for a given group development cycle, the focus of each stage of a team's development has two dimensions of merit: 1) strategic vs. tactical and 2)

interpersonal vs. factual. The stages of team development can be mapped across these dimensions as shown below:

**Figure 2: Team Development and Decision Making**

<b>Strategic</b>	Storming (Roles)	Forming (Goals)
<b>Tactical</b>	Norming (Norms)	Performing (Tasks)
	<b>Interpersonally Oriented</b>	<b>Fact/Information Oriented</b>

During each stage within a cycle, the team is wrestling with group dynamic issues which focus it on a particular quadrant of the above matrix.

### 5.3 Team Decision Making During the First Cycle:

As Figure 2 indicates, each stage of development has a specific focus along two independent dimensions: strategic vs. tactical issues and interpersonal vs. factual information. The struggles which preoccupy the team vary from stage to stage in accordance with these two dimensions. Therefore, in each stage of development the team is naturally concerned with particular aspects of its development (consciously or not) and this preoccupation makes certain decisions easier for the team to consider at one stage than at another. For example, a team in the Forming stage will more easily reach a decision about the scope of its work than about what detailed information must be gathered by each team member. Conversely, a team in the Performing stage, is unlikely to want to reconsider its goals in light of new information unearthed by one team member. This does not suggest that the team is unable to make decisions not congruent

with its stage of development, but it appears that teams have an affinity for certain types of decisions in each stage of development and an aversion to other decisions.

More particularly, decision about scope and goals are most easily addressed by a team in a Forming stage because the team is struggling with scope and goal issues on a continuous basis. Therefore, the team is willing to dedicate the time and effort necessary to reach a decision on these issues. In addition, the time spent on strategic decisions such as goals and scope, opens the door to discussions about other strategic issues (such as how the team will define success, what the team might do under certain scenarios etc.). Teams have affinity for decisions about roles in the Storming stage because their individual roles are evolving at this point. The concerns that each team member is personally wrestling with (about his/her role in the team) facilitates the role based discussions and deliberations which teams undergo during this stage. These interpersonal (rather than factual) yet strategic (since they are concerned with *what* is to be done rather than *how* it is to be done) questions provide an opportunity for teams to consider other issues of this type; for instance, in the Storming stage the team may decide that they are missing an important player on their team and solicit management's help in adding this person to the team. Similarly, individual member's concerns about norms during the Norming stage can trigger discussions about other tactical (how issues) with an interpersonal aspect such as how does the team get a disgruntled function group on board with its recommended action plan. Finally, teams will tend to make decisions about the implementation of actual tasks most efficiently during the Performing stage. Here they will find it easier to make decisions about tactical issues which are based on factual information than on strategic issues or interpersonal issues.

When the team is faced with a decision which is not congruent with its stage of development, the natural aversion which the team feels about the impending decision must be overcome. Many of the techniques for group decision making discussed in section 4.3 can help to overcome the team's aversion to such a decision. For example, a

team in the Performing stage of its first cycle is faced with information which may force it to alter the scope of its work (a Forming stage type decisions). Some teams may, on their own, decide to reevaluate their scope, other teams may not get universal agreement that such a change in scope is in fact necessary. A tool such as consensus mapping or brainstorming can facilitate discussions in which the entire team can participate about whether to alter its scope. Such a tool can remove the team from the tactical mode they have been in and allow them to explore strategic issues such a scope. By suspending their current mode of operation, the team can fully examine the issue at hand and, perhaps, build the necessary buy-in from all team members to alter the team's scope in light of the new information. The decisions making technique has served as the vehicle for allowing the team to overcome its aversion towards making the given (incongruent) decision.

It is interesting that most of the decision making techniques which have been developed are for higher level strategic decisions. The four discussed in this paper: Brainstorming, Consensus Mapping, Nominal Group Technique, and Dialog, all lend themselves towards facilitating Forming stage decisions when the team is not in a Forming stage. Brainstorming, because of its flexibility could also be applied to less strategic decisions such as those of the Norming or Performing stage and Dialog may facilitate all decisions because it seeks to create common frameworks for all team members. Nevertheless, it seems that the decision making techniques may be of most value when a team is faced with a decisions incongruent to its developmental stage.

#### **5.4 Subsequent Cycles:**

As mentioned above, anyone of Gersick and Hackman's "trigger events" can induce the team to reevaluate its approach or reconsider its routines. Should the team decide to change either its approach or its routines, it will embark on a second cycle through the stages of development as it again struggles with new role definitions

(initiating a second visit to the Storming stage), new norms (return to Norming stage), or new tactical task approaches (the Performing stage). On some rare occasions, the team may actually redefine its very goals, initiating a second visit to the Forming stage. While the team may reevaluate some of its routines, most will survive. These surviving routines bound the ability of the team to consider radical new approaches. The surviving routines, which will tend to be relatively firmly entrenched, will trigger automatic responses in the team members. Thus a team which is used to obtaining its marketing information in a timely manner from the VP of marketing is unlikely to ask other members of the marketing group for help. The relationship which has been formed with the VP of marketing may be mutually beneficial, however, this routine which the team has developed bounds the marketing perspectives to which this group will be exposed.

Thus, during subsequent cycles, the routines which have survived transitions will act to limit the amount of new information to which the team is exposed. The range of issues which the team is likely to consider during subsequent cycles is narrower than those of the first cycle. The strategic questions will not be as broad, the tactical questions will be bounded by the surviving routines.

Preexisting routines and impressions will also make the team less open-minded in reconsidering interpersonal or factual issues. The history that a team has developed with one another leaves lasting impressions of one another. Subsequent cycles may show certain individuals in a new light, but the impressions which team members form in the first cycle will be difficult to change radically. Remaining open minded about new information will also be more difficult for the team during subsequent cycles since time and effort has been invested in the existing information base. Changes to this information base will require team members to overcome their investment in the old information. While this is not impossible, it is difficult and will lead to a team choosing to ignore some obviously beneficial information because it does not want to readjust its approach.

Thus we see that during subsequent cycle, the team will exhibit an ever narrowing focus as it progresses from one cycle to the next. Along both dimensions of merit: strategic vs. tactical, and interpersonal vs. factual, the team will consider less information than it did in earlier cycles. In addition, it may outright refuse to incorporate some information which may be very beneficial to the team because such incorporation requires too much readjustment of the team's framework. The team may have too much invested in their earlier framework to make this adjustment.

### **5.5 Decision Making in Subsequent Cycles:**

Much like in the first cycle, teams will have an affinity for certain types of decisions and an aversion to others at each stage of subsequent cycles. Again, the decision making techniques discussed above may facilitate decision making for incongruent decisions. However, the decisions making techniques may have another purpose during subsequent cycles. Since teams tend to narrow their focus during subsequent cycles, even decisions which appear congruent with a teams developmental stage may not get proper consideration during later cycles. As team in a the Forming stage for a second time may not think as broadly as it did the first time in this stage. Therefore, it may not explore all possible options as it seeks to redefine its scope and/or goals. Thus, while a team may be limited due to existing routines, a Brainstorming or Dialog session may allow the team to explore in more detail aspects of its impending decisions which it might otherwise ignore. Thus, the narrowing of focus exhibited by teams in subsequent cycles can be counterbalanced by strategic use of decision making techniques such as Brainstorming, Consensus Mapping, NGT, and Dialog.



## **6.0 CONCLUSION**

### **6.1 Summary of findings**

Group development is a cyclical process each cycle of which is comprised of four independent stages. Each of these stages focuses the group on particular aspects of its team dynamics. Thus certain issues are more easily addressed during some stages of development than are other issues; similarly, some developmental cycles will allow more efficient resolution of certain problems than other cycles will.

The four developmental stages: Forming, Storming, Norming, and Performing, are differentiated in their concern with strategic vs. tactical issues and in the import they give to personnel vs. factual information. Each stage inhabits a different location in the 2 x 2 matrix which these two dimensions form (see Figure 2). A team in a stage concerned with strategic issues (Forming, Storming) can more easily make decisions regarding program scope of goals, while a team in a stage concerned with tactical issues (Norming, Performing) can more easily make decisions on how to implement certain ideas. Similarly, when a team is in a personnel stage (Storming, Norming) it can more easily make decisions based on personal, biased information, while a team in a factual stage (Forming, Performing) is more open to unbiased data. The preferences which exist for any given stage by no means suggest that teams are incapable of making decisions non congruent to their stage of development; it does indicate that it will be more difficult to make decisions requiring though processes incongruent with the team's developmental stage. Thus some decisions will be easier for the team to make and some more difficult to make during each stage of development. When the team is faced with a decisions not easily resolved in its current stage of development, the decision making techniques discussed in section 4.3 are of value.

As the team progresses through its cycles of development, certain habitual routines form within the team. These habitual routines can both increase efficiency and invite unsound decision making. The routines may result in a team miscoding an event and therefore responding to it inappropriately. In addition, as the team goes through cycles its scope becomes ever narrower: its strategic decisions do not solicit as broad a range of ideas, its tactical decisions do not result in the exploration of new avenues for implementation. The routines which have been formed during earlier cycles limit the range of ideas considered during subsequent cycles. Thus process facilitators could make good use of the decision making tools described above to allow teams to break out of the mold into which their past cycles and their current routines have placed them.

## **6.2 Critique of Methods Used**

The ideas presented in this paper are theories developed from past research. They have not been empirically tested in any way. No teams have been studied in which to isolate the various stage and cycles of group development. In addition, no research has been undertaken to understand what other dimensions (beside the strategic vs. tactical and the personnel vs. factual) are of import in group decision making. Thus the ideas presented here are merely theories which must be validated by real world teams.

In addition to the theoretical nature of this work, the theories tend to be heavily influenced by academic literature. Little attempt has been made to understand what real world teams are facing. Thus while it may seem that four distinct stages of development exist, real world teams may indicate otherwise.

## **6.3 Suggestions for Further Study**

In order to test the theories presented, it is suggested that they be compared to current real world best practices. In addition, it is suggested that academia consider

studying the group development process as not merely sequential, non-sequential, and/or routinized but that the cyclicity of team development be considered. Finally it is suggested that team decision making be analyzed for an affinity and an aversion to certain decisions during certain stages/cycles of development. If the theories are confirmed, it is suggested that group decision making tools be expanded to meet the challenges raised.

*REFERENCES*

1. Ancona, Deborah G. "Note on Group Decision Making". (unpublished Note to MIT Sloan School Masters students)
2. Berg, Jeffrey. (1993). Interview with author, August 20, 1993
3. Dechant, Kathleen, and Marsick, Victoria J., and Kasl, Elisabeth. (in press) "Toward a Model of Team Learning". In *Studies in Continuing Education*, (Vol. 15, No. 1, in press)
4. Gersick, Connie J.G. (1989). "Marking Time: Predictable Transitions in Task Groups". In *Academy of Management Journal*, (1989, Vol. 32, No. 2) pg. 274-309
5. Gersick, Connie J.G. (1988). "Time and Transition; Toward a New Model of Group Development". In *Academy of Management Journal*, (March 1988) pg. 9-41
6. Gersick, Connie J.G., and Hackman, J. Richard. (1990). "Habitual Routines in Task-Performing Groups". In *Organizational Behavior and Human Decision Processes*, (1990, Vol. 47) pg. 65-97
7. Gladstein, Deborah. (1984). "Groups in Context: A Model of task Group Effectiveness". In *Administrative Science Quarterly* (1984, Vol. 29) pg. 499-517
8. Gould, Paula (1994). Interview with author, January 20, 1994
9. Hatvany, Nina G. (1982). "Decision Making: Managers and Cognitive Models". In Managing Organizations, Readings and Cases, Nadler, David A., Tushman, Michael L., and Hatvany, Nina G. editors (1982, Little Brown and Company, Boston, MA) pg. 21-34
10. Hatvany, Nina G., and Gladstein, Deborah. (1982). "A Perspective on Group Decision Making". In Managing Organizations, Readings and Cases, Nadler, David A., Tushman, Michael L., and Hatvany, Nina G. editors (1982, Little Brown and Company, Boston, MA) pg. 213-227
11. Isaacs, William N. (1993). "Taking Flight: Dialogue, Collective Thinking, and Organizational Learning". In *Organizational Dynamics* (American Management Association, Autumn 1993, Vol. 22, No. 2) pg. 24-39
12. Iyer, R.K., and Raja, M.K. (1987). "Toward an Organizational Decision Support System: A Process-Oriented Approach". In *Human Systems Management* (1987, Vol. 7, No. 1) pg. 21-29

13. Katzenbach, Jon R. and Smith, Douglas K. (1993). The Wisdom of Teams, 1993, Harvard Business School Press, Boston MA
14. Kowitz, Albert C., and Knutson, Thomas J. (1980). Decision Making in Small Groups. The Search for Alternatives, 1980, Allyn and Bacon, Inc., Boston, MA pg. 3-22
15. Lipnack, Jessica, and Stamps, Jeffrey. (1993). The Team Net Factor, 1993 Oliver Wight Publications, Inc. Essex Junction, VT
16. Mosy, Jeff. (1994). Interview with author, March 23, 1994
17. Schein, Edgar H. (1993). "On Dialogue, Culture, and Organizational Learning". In *Organizational Dynamics* (American Management Association, Autumn 1993, Vol. 22, No. 2) pg. 40-51
18. Scholtes, Peter R. (1988). The Team Handbook; How to Use Teams to Improve Quality, 1988, Joiner Associates Inc., Madison Wisconsin
19. Shaw, Marvin E. (1976). Group Dynamics. The Psychology of Small Group Behavior, 1976, McGraw-Hill, Inc., New York, NY
20. Tuckman, Bruce W. (1965). "Developmental Sequence in Small Groups". *Psychological Bulletin* (1965, Vol. 63, No. 6) pg. 384-399
21. Whellan, Susan A. (1994). Group Processes. A Developmental Perspective, 1994, Allyn and Bacon Inc., Boston MA