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# Team Leadership Approaches for Corporate Project Managers

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TEAM LEADERSHIP APPROACHES FOR CORPORATE PROJECT MANAGERS

A Synthesis Project Presented

by

CHRIS GRALTON

Submitted to the Office of Graduate Studies, University of Massachusetts Boston,  
in partial fulfillment of the requirements for the degree of

MASTERS OF ARTS

August 2002

Critical and Creative Thinking Program

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## ABSTRACT

### TEAM LEADERSHIP APPROACHES FOR CORPORATE PROJECT MANAGERS

August 2002

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Directed by Steven Schwartz, Ph.D.

The study of Critical and Creative Thinking (C&CT) methods introduced me to a number of new approaches and tools that have vital and practical applications for today's corporate team leaders. The primary purpose of my paper and the Genuity Inc. case example is to demonstrate how these C&CT approaches and tools can be used by corporate team leaders to motivate, direct and lead their teams.

Towards this end I have organized my paper into two major sections. 1) In the first, I lay the groundwork by defining the challenges facing today's project managers and the cross-functional teams they lead. 2) In the second section, I introduce and discuss C&CT concepts for analyzing and defining thinking styles of team members, and how this knowledge can be used by project managers for more effective leadership.

The concepts covered will help team leaders address the wide range of challenges they face today. These concepts include the conceptual blocks to better problem solving, including common barriers to creative thinking, cultural blocks, emotional blocks, perceptual blocks, and intellectual blocks, as described by James Adams in *Conceptual Blockbusting, a Guide to Better Ideas*. (1974)

In addition, I discuss and illustrate the five ways to define a problem as classified by R.E. Myers & E.P. Torrance (1964); Glenn Parker's team player styles (1994); the language of thinking outlined by Shari Tishman, *et al*, in *The Thinking Classroom, Learning and Teaching in a Culture of Thinking* (1995), and the merits of intrinsic and extrinsic motivation as defined by Teresa Amabile in *Motivational Hypothesis* (1983) and *Handbook of Creativity* (1999.) It is my hope to demonstrate how each can be a viable or valuable asset in today's increasingly challenging corporate environment.

I also review some effective tools for team development and motivation. I begin with brainstorming, (Osborn, 1963), a classic technique for extracting information and generating new ideas. My intention is to show how brainstorming can be used as a tool for problem identification and solving by team members. The next tool, Force Field Analysis (Lewin, cited in Brown, 1989), can be used by managers to help team members remain focused on their common goal by identifying forces that support or work against a solution.

I conclude my paper by calling on team leaders and project managers to embrace these C&CT methods and tools as they face the constant challenges of managing people and resources toward successful goal and project completion.



## CHAPTER I

### INTRODUCTION

During my corporate career I encountered many examples of traditionally managed teams that lacked the ability to successfully work towards a common goal. My search for methods to overcome these failings led me to the study of Critical and Creative Thinking (C&CT) methods, where I was introduced to a number of concepts and tools that have vital and practical applications for today's corporate team leaders. The primary purpose of this paper, therefore, will be to demonstrate how these C&CT concepts and tools can be used by corporate team leaders to motivate, direct and lead their teams.

I have organized my paper into two major sections. In the first, I lay the groundwork by defining the challenges facing today's project managers and the cross-functional teams they lead. Examples of these include team members being unclear about their common purpose and goals, or not understanding how their individual contributions influence other team members or their organizations. In the second section, I introduce and discuss C&CT concepts for analyzing and defining team functioning, and how this knowledge can be used by project managers for more effective team leadership.

The concepts covered will help team leaders address the wide range of challenges they face today. These concepts include: conceptual blocks to better problem solving as described by J. Adams (1974); the five ways to define a problem as classified by R.E. Myers & E.P. Torrance (1964); the team player styles of G. Parker (1994); the thinking styles outlined by S. Tishman (1995) and the merits of intrinsic and extrinsic motivation as discussed by T. Amabile. (1983 and 1999) It is my hope to demonstrate how each can be a viable or valuable asset in today's increasingly challenging corporate environment.

In fact, based on statistics such as the following, one could argue that the need to utilize these C&CT concepts has never been more apparent. Though three-quarters of small business owners acknowledge that creative thinking is either "very important" (54 percent)



or even “crucial” (20 percent) to the success of their firms, 24 percent say they make little or no room on their calendars to generate ideas. (Ferrendelli, 2000, p. 28)

The cause of this misappropriation of time may be traced to our traditional corporate culture, in which team members are often reluctant to try different approaches, take risks, or openly assess results out of a fear of being made the ultimate scapegoat if a decision fails to yield satisfactory results.

## CHAPTER II

### CHALLENGES OF LEADING PROJECT TEAMS

#### **The Challenges Today**

Today, the challenges of global competition, mergers, the volatile economy and unemployment, as well as the impact of technology, have made it vital that American corporations identify creative ways to reduce costs and improve quality. For example, *The Wall Street Journal* recently reported that “Intel Corporation will close a money losing unit that hosted Web sites for other companies, continuing an effort to refocus on its core chip-making operations.” (June 19, 2002, p. B3)

Another sign of the times is massive layoffs in the telecom and technology sectors, as illustrated by this quotation, again from *The Wall Street Journal*: “Qwest Communications credit rating was recently cut to ‘junk’ status by rating agencies and Qwest has spent the past year frantically trying to cut costs by slashing more than 17,000 jobs, selling assets and continually reducing capital spending. (June 17, 2002, p. A1) by rating agencies and Qwest has spent the past year frantically trying to cut costs by slashing more than 17,000 jobs, selling assets and continually reducing capital spending.” (June 17, 2002, p. A1)

As a result of all this, corporations are growing to appreciate the value that effective teamwork and creativity can add. A recent successful example was Daimler-Chrysler’s launch of its retro PT Cruiser vehicle. Daimler-Chrysler set baselines for supply chain performance and the use of well-integrated design and engineering tools. The latter included virtual reality tools to help designers and engineers adjust the placement of rearview windows, cup holders, radio and so on, prior to creating a prototype, resulting in a saving of approximately \$20 million. (*PM Network*, May 2002, pp. 28-29)

Another creative example in this do-more-with-less economic environment can be seen in Hewlett Packard’s multi-faceted approach to its implementation of new technology for Spanish banking firm, Caja Granada. Hewlett Packard’s corporate project management initiatives (a form of project management office) summarized a process for leading change

by gaining the support of, and minimizing impact on, the customer. The team worked to identify key players, develop an implementation plan, understand reactions to change, and lead the change process. (*PM Network*, March 2002, pp. 24-28)

### **Challenges of Team Leadership and Leading Project Teams**

A number of books have been written recently on business leadership and the value of teamwork and team players in organizations. These include the works of James Heskett, Earl Sasser Jr. and Christopher Hart (1990), Frank Pacetta (1994), and Peter Senge (1994). In the past, however, team building was pushed more by behavioral scientists than it was accepted and practiced in American business. (Parker, 1990) Teamwork was considered non-essential and not critical for the success of the organization. Team building, organizational effectiveness and external challenges to team building were lumped with other organizational goals, and were more of an afterthought, rather than an integral part of the corporate culture.

Many modern executives attempt to articulate new philosophies about “empowering their teams.” But, few organizations are working hard to introduce tools and methods to actually help teams make intelligent and informed decisions. An example of this disconnect can be found in a 1995 poll in which three-quarters of the respondents believed that top executives do pretty much what they want to no matter what people think. (Kouzes & Posner, 1995)

In the face of this reality, how can team leaders consistently motivate, lead and direct teams at a professional level? As I have often witnessed, a reputation for effective team leadership can make or break a career. To lead a team, however, one must first understand how teams function in organizations, what are the common denominators of cohesive teams, and why some teams are not able to collaborate toward their major goals and missions.

Parker (1994) states that the challenge facing project managers, when seeking to effectively manage cross-functional teams, includes three dimensions:

1. Managing yourself, being an effective team player;
2. Managing the inside, being an effective team;
3. Managing the outside, building effective inter-team relationships.

Before we look further into these challenges, we should first describe what is meant by “cross-functional team.”

### **Cross-Functional Teams**

Change is the norm in corporate America. Parker (1990, p. 16) notes that with organizational change comes the need for adaptive people who can work with a diverse group on a team. However, he makes an important distinction when defining a team. According to Parker, a group of people is not a team. “A team is a group of people with a high degree of interdependence geared toward the achievement of a goal or completion of a task.” Most of us have been part of such a team, working with others all of whom report to one or more managers within a particular group, department or division. This is known as a functional team.

We can find one example of how detrimental the functional-team approach can be in Williams Communications Group (WCG), a telecommunications firm, formerly a division of Williams Companies. The management of WCG decided in March of 1999 to re-enter the retail telecommunications marketplace, an area it had been successful in before selling its Wiltel division in 1994 to WorldCom. The primary goal for WCG was to strategically sell telecommunication services to their existing customers who typically purchased telecommunications hardware equipment.

WCG made the mistake of hiring a sales team before a management team was assembled to strategize the territories, and provide training and support models for these newly acquired customers. In addition, the sales managers worked remotely from home offices or the corporate headquarters in Houston, Texas. WCG also failed to properly integrate its new services with its traditional hardware and equipment services. There was no upper management sponsorship from the corporation to allow WCG sales reps to



successfully approach its own (Williams) customers. Sales managers of WCG were advocates of this program, but Williams own account managers did not embrace the idea of WCG being introduced to their accounts even though it was the same company. As a result, many of its existing customers were purchasing telecommunications services from other carriers and were under contract with AT&T, Sprint, WorldCom, Qwest and so on. Meanwhile, Williams made extremely large infrastructure investments in broadband and fiber optics.

In April 2002 WCG filed for Chapter 11 protection and is now restructuring millions of dollars of debt. The venture failed because neither team was able to develop the trustworthiness, credibility, tolerance, flexibility, pro-activeness and knowledge necessary to form an effective partnership.

Conversely, cross-functional teams have a mixture of people from different backgrounds, orientations, cultural values, and styles, as well as areas of responsibility and expertise, departments and divisions. (Parker, 1994) In the corporate setting, cross-functional teams draw members, with their specialized expertise, from different departments within a company, and use that expertise to help solve problems for the organization as a whole. Cross-functional teams embody the positive features of an informal organization because they provide the opportunity for creative expression usually reserved for small entrepreneurial companies. (Parker, 1994)

Parker also gives us a real-life example of how cross-functional teams can contribute positively to a growing organization.

Finn Knudsen, director of research and development at Adolph Coors Company, said that a team composed of people from research, marketing, sales, production scheduling, production, quality control and assurance and packaging was able to cut by 50 percent the time it usually takes to launch a new product. (Parker, 1994, p. 68)

With this in mind, and before I begin this discussion of the concepts of Team Leadership Approaches, I would pose the following question: How would you handle the critical leadership challenges mentioned above to facilitate change for the better in your organization? I assert that using Critical & Creative Thinking approaches will help sort out some of the corporate and economic challenges you face as project managers. But, what exactly do we mean by “Critical and Creative Thinking?”

## **CHAPTER III**

### **CRITICAL & CREATIVE THINKING APPROACHES**

#### **Critical and Creative Thinking Defined**

It can be argued that the ability to think well requires both creative and critical capabilities, that neither type of thinking can be effective without the other. (Sternberg, 1999, p. 43) However, defining Critical & Creative Thinking is not an easy task. There are a plethora of definitions available. T.Z Tardiff and R.J. Sternberg describe “creativity” with the following quotation:

Some experts claim that creativity is building on an initial insight; others say creativity is just the result of a lot of work -- and sudden insights have almost nothing to do with it. Some emphasize the role of chance and randomness in creative discovery and problem solving; others stress intentional, mindful planning. (Tardiff and Sternberg, 1988, p. 18)

Michaela Driver notes how different applications can affect our use of creativity:

Unlike creativity in art or music education, creativity in business education is not an end in itself, as the primary purpose of business education must still be to provide relevant business knowledge. (Driver, 2001, p. 28)

For critical thinking, Richard Paul and Gerald Nosich offer this definition:

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communications, as a guide to belief and action. (Paul and Nosich, 1992, p. 1)



While Robert Ennis gives us this insight as to how critical thinking may be defined:

I define the concept *critical thinking* as 'reasonable reflective thinking focused on deciding what to believe or do. (Ennis, 1990, pp. 402-405)

For my own guidance, and for the purposes of this paper, I view Critical and Creative Thinking as an amalgamation of being inventive, tolerating ambiguity, finding solutions, and the ability to question basic principles. An example of this definition of Critical and Creative Thinking in action would be a defense attorney who uses the above skills during cross-examination. The attorney is inventive when crafting options, understands that ambiguity is part of the process, and, of course, questions fundamental principles in working toward a fair and reasonable settlement for the client.

I invite you to think back in your career. Now identify a team project or task for which you were assigned the responsibility that did not go well or as planned. How did you feel? What were some of the red flags that you might have heeded? What could you have done to induce certain team members to cooperate or contribute more fully? How could you have delivered feedback to a non-performing member to correct the issues and motivate him or her? If these questions are indeed part of a typical scenario you recall from the past, then learning about Team Leadership Approaches using Critical and Creative Thinking for Corporate Project Managers will be extremely beneficial. The reality is that most of us learn by a trail-and-error process, hoping we will not repeat our mistakes. A little advance study now can shorten that learning process, saving you time and, possibly, embarrassment, while fostering trust and commitment within the team you lead.

The following example demonstrates how Genuity (a billion-dollar corporation about which you will read more later) uses Cross-Functional Teams. Genuity's services are not only complex in implementation, but usually have large financial consequences, ranging from \$500,000 up to \$5,000,000 in annual customer revenues. Its need for Cross-Functional Teams is imperative.

When a company decides to sign a contract with Genuity, Genuity assigns the customer a Quality Review Team (QRT) to review the contract, what was ordered and what will be installed. This team is comprised of members from Legal, Marketing, Engineering and Product Operations, in addition to the Account Team, with its representatives from Sales, Project Management, and Pre-Sale Engineering. We can surmise that taking this “learning organization” to the next step will require all team members to have an understanding of each other’s unique contributions.

To begin let us review some of the thinking styles that you may find in the contributing members of a Cross-Functional Team. The theory of “team player styles” is based on Parker’s notion that each of us has the capacity to be an effective team player in different ways. For example, you may be willing to learn a new system and take on an added responsibility that is needed by the team. Someone else may help by encouraging someone who is not acclimating to the assignment to help get them involved by using humor and reducing conflicts in a group. (Parker, 1994) So we can see that teamwork requires an effective mix of people who exhibit a variety of style or approaches -- or “team player styles.”

### **Adaptive Team Player Styles**

Glenn Parker (1990, pp. 63-64) has identified four “team player styles.”

They are:

- 1. Contributor (Task Oriented):* The Contributor is a task-oriented team member who enjoys providing the team with good technical information and data. This person emphasizes “doing your homework,” and pushes the team to set high performance standards and to use its resources wisely. Most people see the Contributor as dependable, although they believe, at times, he or she becomes too bogged down in details or data. The Contributor does not see the big picture or the need for positive team climate.
- 2. Collaborator (Goal Oriented):* The Collaborator is a goal-directed member who sees the vision, mission or goal of the team as paramount. This person is flexible and open to new ideas, willing to pitch in and work outside his or her defined role, and is able to share the



limelight with other team members. Most people see the Collaborator as the “big picture” person but they believe, at times, he or she may fail to periodically revisit the mission. The Collaborator often does not give enough attention to the basic team tasks and overlooks the individual needs of the other team members.

*3. Communicator (Process Oriented):* The Communicator is a process-oriented member who is an effective listener. This person is a facilitator of involvement, conflict resolution, consensus building, feedback and the building of an informal, relaxed climate. Most people see the Communicator as a positive person, but one who finds, at times, the process is an end in itself. The Communicator often does not confront other team members or give enough emphasis to completing task assignments and making progress toward team goals.

*4. Challenger (Question Oriented):* The Challenger is the team member who questions the goals, methods and even the ethics of the team. This person is willing to disagree with the leader or higher authority and encourage the team to take well-conceived risks. Most people appreciate the value of the Challenger’s candor and openness, although, at times, he or she may not know when to back off from an issue.

Now that we have reviewed these basic thinking and interacting styles, I invite you to look at how they have been applied to a real-life corporate environment in order to maximize the contribution of each employee based on his or her individual thinking styles and competencies.

### **Genuity Inc, an Application of Critical and Creative Thinking Approaches**

Genuity is a one-billion-dollar spin-off from GTE Internetworking. It is a leading Internet Services Provider (ISP) drawing on core competencies in managed Web hosting, Internet access, and managed security services. Headquartered in Woburn, MA, Genuity employs approximately 2,600 people worldwide.

According to a recent study by Standish Group International, West Yarmouth, MA, U.S. companies waste a huge portion of the more than \$250 billion spent annually on IT

application development because they fail to utilize effective project management and employee skill development. (Standish Group Intl, 2002). To avoid contributing to this statistic, Genuity supports training at all skill levels and requires that all Project Managers become Project Management Institute trained (PMI certified).

This Employee Management Process includes training in certain competencies, or behaviors, that have been exhibited historically by excellent performers in that position. Genuity assesses in four core competencies: Leadership, Market Focus, Critical Thinking, and Continuous Improvement. (Genuity Employee Handbook, p. 5) It also works to ensure that employees in all groups are able to progress into other career paths based on their own development and the core competencies outlined above. Its career path system:

- Supports and encourages employee development through skill improvements and competency development
- Motivates individual growth
- Supports a reward system that reflects individual contributions and competencies, which leads to better team performance
- Supports processes of retaining employees through pay, opportunity for new challenges, visibility, professional development, and meaningful work
- Helps develop a multi-skilled workforce through easier lateral mobility by minimizing the focus on a hierarchical or salary graded structure. (Genuity Employee Handbook, p. 6)

In addition to making the most of what individual employees have to offer, Genuity's Employee Management Process helps the corporation's project managers to minimize schedule delays, with proper planning and project validation by team leaders, customers and other stakeholders.

We can gain a deeper understanding of how individuals function in a team through Tishman's Language of Thinking, as it amplifies Glenn Parker's Team Player Styles in problem solving techniques.



## **Dimensions of Good Thinking**

Genuity also gives us a valuable study of some of the team leadership approaches that we can learn from Tishman, Perkins and Jay's six dimensions of good thinking. (1995) These are as follows: 1. Thinking Dispositions, 2. Mental Management, 3. Strategic Spirit, 4. Higher Order Knowledge, 5. Transfer, 6. language of thinking. I will discuss four of them.

*1. Thinking Dispositions:* Tishman refers to Thinking Dispositions as inclinations and habits of mind that benefit productive thinking. This involves a willingness to take risks and seek new innovative ways to push yourself to your "full potential." Tishman points out that abilities and skills alone cannot fully account for human performance. Tishman makes the analogy of two skaters sharing the same raw ability, but having the ability does not guarantee that one will use it and use it well. The following quotation illustrates this,

Good thinkers are disposed to explore, to question, to probe new areas, to seek clarity, to think critically and carefully and to consider different perspectives. (Tishman, 1995, p.40)

The Thinking Disposition may be seen at work during one of Genuity's Joint Application Development (JAD) sessions at the customer's site. At these meetings, Genuity brings in representatives of their outside partners or subcontractors to join with its own Cross-Functional Team members to provide an open exchange of ideas on, and technical feasibilities pertaining to, a customer's particular needs. All members, including the customer, are encouraged to ask questions and explore beyond the obvious first answer in order to provide a better solution. They stress intensive follow-up questioning and seek clarity from the customer, often resulting in an alternative solution or an entirely new solution. Genuity and its outside partners then can analyze the proposed solutions to see if they are feasible. This also serves to eliminate the chance of solutions being offered by Genuity and its partners without careful consideration from Genuity's customers. Resulting benefits include streamlining the process by having the customer's input upfront, thus

cutting down on the time-consuming back and forth of proposal review and approval due to customer ambiguity and network infrastructure rework.

2. *Mental Management*: Tishman et al. (1995) refer to this as the art of reflecting on and guiding one's own thinking processes, also referred to as "metacognition." They explain that good team leaders in any setting share similar qualities. They tend to be astute observers, careful evaluators and effective leaders. In other words, they are adept at managing their own thinking processes. This is particularly useful because when project managers can reflect and manage their own thoughts effectively, they can diagnose shortcomings and assess strengths in others.

For example, Genuity applies "metacognition" as part of every employee's Performance Management Process. Genuity's Human Resource and Operational Planning groups work with each employee on development planning. This involves guiding the employee's thinking as he or she, in conjunction with the reporting manager, develops a detailed operating plan listing specific goals and contributions to be accomplished during the following quarter. At the end of the quarter each employee's performance is reviewed against the objectives and contributions initiated by the manager and employee.

3. *Strategic Spirit*: Tishman (1995) explains this as enthusiasm for systematic thinking and the tendency to invent and use thinking strategies in response to challenging situations. For example, Genuity was faced with a thinking challenge on how to "constantly re-adapt" to a rapidly changing technological environment. Previously, Genuity's services required a 30-to-40-day installation cycle from submission of the initial order to the actual installation of the equipment. Instead of simply trying to speed up the steps in the already established process, Genuity developed a concept and product in one called "Black Rocket" to address this extended installation cycle. Black Rocket essentially manages all facets of a corporation's network services from web hosting, access to the internet, and internet security monitoring services, all in a ready-to-launch package from one vendor-Genuity. Unique in the industry, Black Rocket essentially reduced the delivery-and-installation time to ten business days or less in the U.S marketplace from the date the contract was signed

and credit approved. Not only did Black Rocket reduce the installation time and increase the revenue cycle for Genuity, it also solved another important challenge -- the development of two major Web Hosting Services platforms, one for UNIX customers and the other for Windows-based customers. This permits transfer of knowledge, and is adaptable, to many different situations, while simplifying the process for the customer.

*4. Higher Order Knowledge:* Tishman believes that higher order knowledge sits above the regular content knowledge in a discipline. Tishman et al. (1995, p. 125) break higher order knowledge down into three parts: Problem Solving; Evidence; Inquiry, or:

The knowledge and craft of solving problems and managing tasks in a discipline

The knowledge and craft of evidence and explanation in a discipline

The knowledge and craft of discovery and invention in the discipline.

A parallel with the above may be seen in the following process improvement examples, again from Genuity:

A. How does Genuity demonstrate “the knowledge and craft of solving problems and managing tasks in a discipline?”

When a problem arises, Genuity uses a multi-faceted approach combining human and technological intelligence to analyze its processes based on previous experience. On the technical end, project team leaders extract information on the problem from the Data Centers that warehouse the servers. This information is used to create a trouble ticket.

All open trouble tickets with a high severity level are addressed at meetings held every morning at 9:00 AM. Attending, in person or by conference call, are every Cross-Functional Team member, which includes representatives from network operations, customer service, and all the technical groups. This is Genuity’s chance to allow everyone involved to explain what actions have been taken relating to the open tickets; how the problems will be resolved in a specific time frame, and who will resolve them. As evidence



that the problems have been resolved, newly closed trouble tickets are reviewed for completion and accuracy.

Genuity developed this original process for solving trouble tickets using patented relational databases developed by its parent company, BBN. These systems provide user assistance in retrieving data from a relational database, such as the one used by Genuity in the above example. (Patent # 6,023,697 – Systems and Methods for Providing User Assistance in Retrieving Data from a Relational Database) (Source: <http://www.bbn.com/successes/patents.html>)

B. How does Genuity demonstrate the knowledge and craft of evidence and explanation in a discipline?

Genuity realized early on that customers were not only purchasing services, but needed consulting assistance beyond a pre-sales process. Genuity addressed this with the development of “eServices Consulting”. Through eServices, Genuity delivers a planning report that offers a clear road map (evidence and explanation), with such deliverables as final architectural design, infrastructure content flow map and key risk areas in the customer’s existing architecture, including security vulnerabilities, and recommendations for the best course of action.

As we have seen, an understanding of thinking styles based on C&CT concepts can be a tremendous asset to the Project Leader of today. Yet, our most innovative efforts to work with a diversity of thinking styles can be thwarted by barriers or blocks to creative thinking. Based on long-held habits and learning styles, these barriers, or blocks, may keep us from seeing the real problem. They impede the creative process by pressuring teams to conform to expectations or to jump to conclusions without a complete and accurate picture of the problem.

C. How does Genuity demonstrate “the knowledge and craft of discovery and invention?”

Genuity's history dates back to 1969 when BBN was awarded the US government contract for developing the Arpanet, the precursor to what is known as the Internet today. In 1972, BBN essentially invented our modern protocol for sending e-mail messages. BBN laid the groundwork for today's Internet by successfully transmitting the first person-to-person e-mail message using the @ sign. The address was *ray@bbn.com*. One of the engineers was experimenting with how to send a message over an IP packet-based network. His many different attempts failed until, by separating the user name via the @ sign and using the domain of the company, the engineer was able to successfully complete his transmission. Today the @ with domain name is the accepted protocol for all e-mail messages.

James Adams offers us insight into why and how blocks impede our creative capacity to improve.

### **Adams' Conceptual Blocks**

An understanding of the Conceptual Blocks defined by James Adams can help remove the "mental walls" that block the problem solver from correctly perceiving a problem or conceiving a solution – a mandatory first step in any team project situation. The major issue here, as Adams mentions, is that many people are not aware of the extent of their conceptual blocks.

Adams (1974, p. 65) identified four major categories of these conceptual blocks. They are as follows:

*1. Cultural & Environmental Blocks:* Cultural Blocks are social influences, expectations and conformity pressures, which feed on our fear of being different in a group. For example, if team members do not feel comfortable explaining problems with the company's technology to their managers, perhaps because of a fear of a negative performance review or a fear of being branded a "trouble maker," they will be less likely to report those problems. Environmental Blocks distract us from our problem solving or

impede our ability to concentrate due to physical distractions. For the team this could mean overcoming distractions by having meetings held in reserved conference rooms rather than outside someone's cubicle office.

*2. Emotional Blocks:* These interfere with our ability to tolerate ambiguity, take chances, and take on new risks from an individual standpoint. Team Leaders need to provide a safe environment in which team members are comfortable thinking, and contributing ideas from outside of their normal individual patterns. In addition, a safe atmosphere encourages members to exchange or reveal strong feelings. For example, Genuity's management team stresses the use of an "open door" policy to elicit any issues an employee may have, such as being threatened at work, harassment issues or discomfort about approaching a co-worker on an issue. Genuity's HR dept also has an anonymous 1-800 hotline to address confidential issues.

*3. Perceptual Blocks:* These distort any information we may gather. "We see what we expect to see." Team Leaders must recognize and offset the preconceived or stereotypical judgments that team members may bring to a problem. This can occur, for example, when particularly self-sufficient team members are asked to enlist the assistance of others. These team members may prefer to out figure the problem for themselves because of a misplaced fear being seen as ineffective. In reality, this can lead to missed deadlines and wasted resources.

*4. Intellectual & Expressive Blocks:* Intellectual Blocks cause us to think in one rigid fashion, whereas Expressive Blocks cause us to communicate in one rigid fashion. For example, sales people sometimes communicate and think in a restrictive manner based on memorized technical details or "internal" scripts in their minds that describe product information. Customers, for whom it may be their first encounter with a particular product or service, often require a less rigid way of communicating, with an emphasis on benefits and features. Project leaders can address this need by making sure team members are sensitive to these. Techniques can be used such as weekly team meetings with open



discussions, one-on-one meetings, and asking team members to communicate their awareness of blocks to their manager or team leader.

These significant blocks or barriers to team learning are some of the major reasons teams fail to reach their collaborative mission and goals. Once addressed, team leaders are free to tackle the, perhaps more recognizable, challenges of problem identification. In fact, according to Krantz (1990, p. 376) creative problem solving is generally seen by today's organizations as desirable, and attempts are made to develop creativity in employees as a necessary skill in today's corporate environment. R.E. Myers and E.P. Torrance (1964) give us the means for developing a deeper understanding of problem identification and problem solving skills. Myers and Torrance developed five specific steps for analyzing a given problem or challenge.

In the next section, I will explain Myers and Torrance's Problem Defining model and systematic step-by-step approach to problem defining, again using Genuity as our example. It should be noted that, while Genuity may or may not consciously use these particular problem identification skills, it does employ some of these Critical and Creative Thinking approaches in this area.

### **Myers & Torrance's Problem Defining**

#### *1. Identifying the real problem, simplifying and clarifying the problem:*

What is the basic problem here, or what are we trying to do? For example, Genuity asks customers to fill out pre-sales questionnaires to obtain critical information prior to recommending a solution. Each question helps eliminate any ambiguities that could delay installation or cause problem in the future.

#### *2. Isolating important aspects of a problem:*

What are the essential elements of importance to solving this problem? As a case in point, Genuity provides customer service representatives a flow chart of questions to ask when trouble shooting a technical problem over the phone. These flow charts were based on templates codified from past experiences. For example, if a customer receives an error

message, Genuity can take the exact wording of the error message and find the remedy based on the flow chart. Not only did this lead to a resolution, but it increased Genuity's resolution time with the customer on the phone.

### *3. Identifying sub-problems:*

What problems are related to this main problem? As in the above case, once the Genuity representative has isolated the problem, he or she must identify what other existing problems may be related to the core problem. For example, if a server is down, are the remote users unable to dial in? When do the servers typically go down? By isolating which users and which servers go down, the service representatives can identify the sources of the outages.

### *4. Proposing alternative definitions:*

How else can we define this problem? To determine whether the reported problem is masking other, harder to determine, problems, Genuity asks still more questions of their customers after reviewing the situation and determining the most likely answer. Some problems can be reoccurring, such as a server re-boot, but solving the re-boot problem may not provide a permanent solution. Examining alternative options helps PGenuity find more lasting and complete solutions.

### *5. Defining a problem more broadly, as open to new possibilities:*

For example: Asking "why" questions. There is no substitute for asking clarifying questions to bring a problem closer to resolution. Some of Genuity's customers want to add a "firewall", which is a device that filters and monitors internet traffic or IP packets going in and out of their organization. Often the customer is unaware of new problems, such as an over burdening of the system, that may be caused by the addition of a firewall. So Genuity will ask why the customer feels the need to filter all traffic. Is it monitoring employees' Internet usage? Has someone attempted to gain access to their corporate network? By digging down into the "why" questions Genuity can propose better solutions after examining the inter-related implications.

The relationship between creativity and problem solving takes on new and profound meaning when combined with persistence and problem defining. Problem defining is a never-ending process of how people respond to real world contents in which the problems are not presented or structured well, and how they apply critical and creative attributes, such as fluency, flexibility, originality and deductive reasoning, to solve problems. (Senge, 1994)

### **Critical and Creative Thinking Tools**

Occasionally project managers will encounter superior teams that embrace the concepts but somehow do not apply those concepts to practice. In this next section we will focus on practical, hands-on tools that help project managers put Critical and Creative Thinking concepts to work in order to engage and facilitate team building.

#### *Group Brainstorming:*

Developed by A.F. Osborn (1963), brainstorming can be used in a variety of team building practices, including efforts to identify risks in a project, clarify assumptions and generate potential responses for the team. This classic technique is often misinterpreted as a basic core dump of information that may not be entirely useful in the development of ideas. Brainstorming is exactly the opposite. It is an expression of ideas that then feeds other ideas. Brainstorming encourages team members to build on one another's concepts and perceptions. The overall benefit is a free flow of shared information without criticism in the initial stage, but with careful evaluation later.

Participants can fuel their imagination with ideas as the facilitator documents or catalogs each new suggestion. The following is an outline for how teams can use group brainstorming. (Pritchard, 2001, p. 116)

Pritchard contends that brainstorming is applicable in virtually every step of the project management process. Its broad utility makes it appealing in a variety of settings. Examples include:

- Risk identification to establish a base pool of risks for a project,



- Qualification of terms as to what constitutes high, medium, and low category risks,
- Response development to generate risk strategies and to examine the implications thereof.

#### Major Steps in Applying the Technique:

- *Establish the basic premise of the brainstorm and prepare the setting.* The goal is to pose the questions and let the group lead the ideas. The setting should facilitate this by making the capturing and documenting of information as simple and unobtrusive as possible.
- *Identify appropriate participants.* Some individuals function well in a group setting and contribute readily; others do not. Identify individuals who are likely to contribute.
- *Explain the rules of brainstorming.* Emphasize that all ideas will be recorded because all ideas have some measure of value to the team.
- *Solicit information from the group.* Participation should be allowed to flow freely within the group. The facilitator must always maintain control so one or two participants do not dominate the group's creative ideas.
- *Review the information presented.* As the group runs out of insights or as the session nears a close, the brainstorming session should be re-presented after a thorough review of all ideas shared thus far. Any new ideas should be captured at this time. In some organizations, this will be used as the one and only opportunity to critique the ideas presented earlier in the brainstorming session.
- *Communicate the information.* After the session is complete, the information should be circulated to all participants for their review. This affirms that the information was actually captured and provides a sense of how the information will ultimately be used. This can be organized by the facilitator in many different ways, such as a spreadsheet of desired ideas with columns or as a Word® document.
- *Criticism and Evaluation.* The single largest benefit of Brainstorming is suspension of judgment and criticism to offer a multitude of ideas without being evaluated or feeling some level of team competition.



Brainstorming often opens the door to a free and candid discussion of ideas and issues. In that alone, it adds value. But, brainstorming can also add a new body of knowledge about a given project, product or process. We can further mine this new information by identifying the various pressures promoting or resisting change with a technique known as Force-Field Analysis.

#### *Force-Field Analysis:*

How do we promote and foster the conditions of effective teams? During the 1930s, Kurt Lewin focused his attention on the behaviors of groups and on the forces that help explain the actions of groups in organizations. (Parker, 1990) Lewin's work led to the development of a field of study known as group dynamics. One of his contributions was called "force-field analysis," and it helped broaden our understanding of what people can do to increase the effectiveness of teams. (Lewin, 1951) The following example from Lewin's work illustrates "task interdependence among team members."

Lewin argued that a powerful dynamic is created when a group's members are dependent on each other for the successful achievement of its task. This dynamic may be positive or negative. In the former case one person's success directly facilitates the success of other members. In negative interdependence – known more usually as competition – one person's success is another's failure. (Brown, 1989, p. 30)

Today, Force-Field Analysis is widely used in Critical and Creative Thinking as a problem defining and solving technique for examining the driving-and-restraining forces that may work against a goal, objective or activity. For example, if your team is faced with a challenging decision to launch a new project. Force-Field Analysis might be able to help the team reach a decision by analyzing the positive and negative factors before the project is released.

Force-Field Analysis is used to identify the forces and factors in place that support or work against the solution of an issue or problem so that the positives can be reinforced and the negatives be eliminated or reduced.

Project Managers may wish to use Force-Field Analysis to:

- Present the positives and negatives of a situation so they are easily compared.
- Encourage people to think together about all aspects of making the desired change or permanent change.
- Encourage people to agree about the relative priority of factors on each side of the balance sheet.
- Allow honest reflection on the real “underlying roots” of a problem and its solutions.

Major Steps in Applying the Technique:

- Take a piece of 8.5”x11” paper and make a vertical line down the middle. Then place a horizontal line above the top 1/3 of the paper.
- Write the issue or problem that you plan to analyze on the top portion.
- At the right side of the “T”, write a description of the ideal situation you would like to achieve.
- Brainstorm the forces that are driving you toward the ideal situation. These forces may be internal or external, list them on the left hand side of the “T”.
- Look at your forces that are restraining movement toward the ideal state and list them on the right hand side.
- Finally, using your Brainstormed list, prioritize the forces that will have the most impact (driving forces) and should be strengthened, and identify the restraining forces whose elimination would allow the most movement. (Goal/QPC, 1994, p. 63)

The following is a sample of Force-Field Analysis applied to public speaking:

**Force field:** Fear of public speaking as a Team Leader

**Ideal state:** To speak confidently, clearly and concisely in any situation

<i>(+) Driving Force</i>	<i>(-) Restraining Forces</i>
Increases self-esteem	Past embarrassments
Belief it helps career	Lack of knowledge on the topic
Increases energy of the group	May forget what to say
Ability to persuade others of your ideas	Lack of clarity on precise speech goals

Final Steps:

1. Prioritize the list from the brainstorming,
2. Prioritize the Positive Forces,
3. Minimize Restraining Forces,
4. Take the top three positive or driving forces,
5. Take the top three negative or restraining forces,
6. Find out which positive forces will offset the negative forces to effect change.

It is important to note with Force-Field Analysis that new restraining forces can develop. For example, increased hostility and antagonism in a group can arise with the team going through different stages team development, which could lead to increased absenteeism, turnover and other restraining forces that would upset the equilibrium. A team leader may want to first determine how to reduce the restraining forces instead of attempting to increase the positive forces.

Now that we have discussed how to use Force-Field Analysis to resolve your team's challenges, we can address how to motivate these same teams guided by the theories of Teresa Amabile.

### **Intrinsic and Extrinsic Motivation for Teams**

Amabile's extensive work suggests that intrinsic motivation is a crucial determinant of creativity across different human behavioral types. She defines intrinsic motivation as any motivation that arises from the individual's positive reactions to qualities of the task itself. On the other hand, extrinsic motivation, as defined by Amabile, is any motivation that

arises from sources outside of the task itself. These sources include evaluation, contract-for-reward, external directives, or any of several similar sources. (Collins and Amabile, 1999, pp. 297-312)

For many years, psychologists and researchers have adopted a simple perspective. Intrinsic motivation is good and extrinsic motivation is bad. Yet, according to Collins and Amabile (1999, p. 393) extrinsic motivation can actually enhance creativity. The following quotation from Collins and Amabile illustrates this.

Extrinsic motivation can be helpful when it is in the form of useful information and when it can help you complete a task effectively.

In short, people are driven by the desire of self-improvement with specific feedback on what to improve. If tasks are extrinsically driven, such as praise or a financial reward for performing a task without any specific feedback or useful information shared, this will undermine their creative efforts. Extrinsic motivation with specific feedback after a task or activity is completed will encourage people to enjoy what they are doing because they know what they did well and what needs improvement.

For a sample of extrinsic motivation at work that does provide concrete information we again have no further to look than Genuity. The corporation encourages all of its project managers to conduct weekly “lessons learned” sessions. These become a weekly dialog about some of the challenges faced on projects and useful information from various Genuity operations on improvement of a particular process or procedure. All discussion topics with a particular resolution get posted on Genuity’s Kbank so all project managers and support personnel throughout the organization can review them. This is an example of extrinsic motivation with praise coupled with valuable information (feedback) to improve employees at Genuity through the “lessons learned” sessions.

## CHAPTER IV

### CONCLUSION

#### **Creating Your Own Team Leadership Approach in Your Organization**

In this paper I have covered many topics, from learning to lead others using Project Management methodologies in connection with Critical and Creative concepts and tools, to how Genuity uses some of these concepts and tools in practice. Involvement and interdependence with others are the essential ingredients of corporate life. Any successful project manager or team leader knows that as others become involved the effective team leader has a “two-pronged” decision to make: Either initially embrace team diversity using other people’s different “thinking styles” or see the impact of the team efforts dwindle. The skills, talents and varied experiences of team leadership and learning are vital to teams. Adapting to change isn’t enough, team members must create ideas and possibilities in order to develop a viable team action plan.

Methods and tools alone, however, will not solve your challenges. That will require a deep understanding of your own communication, thinking, and leadership styles as a project manager or team leader in your organization. Your success will depend on how well you can put past events in perspective, sort out the issues, and create new options. Armed with this new enlightenment, you will be able to collaborate with your team and choose the best methods for creating an environment that fosters team leadership in your organization.



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