

THE EFFECTS OF LATERAL AND VERTICAL HETEROGENEITY  
ON FOCUS GROUP DISCUSSIONS FOR ORGANIZATIONAL AND  
LEARNER NEEDS ASSESSMENT

by

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Thesis submitted to the Faculty of the  
Virginia Polytechnic Institute and State University in  
partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

in

Adult and Continuing Education/Human Resources Development

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May, 1994

Blacksburg, Virginia

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(ABSTRACT)

The focus group meeting is an approach to identifying potential learning needs and developing awareness for organizational change. Currently, the literature recommends that focus groups be composed of both laterally and vertically homogeneous group members to enhance trust among participants and facilitate positive group dynamics.

Two research questions explored the relationship between heterogeneity and the quality of focus groups for organizational change and training needs assessment at a multidisciplinary environmental consulting firm: 1) In what way does lateral (disciplinary) heterogeneity affect the quality of focus group discussion? and 2) In what way does vertical (hierarchical) heterogeneity affect the quality of focus group discussion?

Meetings of four focus groups of four participants each were tape recorded, transcribed, and compared according to the following parameters: trust, group development, conformity, participation, awareness of need for change, and idea generation. Each group represented a different combination of lateral and vertical homogeneity or heterogeneity.

The highest quality group discussion and greatest diversity of ideas was found in the group which was laterally heterogeneous and vertically homogeneous. Vertical heterogeneity was found to adversely affect group dynamics.

The findings suggest that moderators who lead focus groups for identifying learner needs and developing an awareness of need for change in organizations might consider composing small, laterally heterogeneous, but vertically homogeneous, groups in order to enhance group development, encourage wholistic understanding of the organization, and provide diverse ideas and high quality results.



## ACKNOWLEDGMENTS

I wish to extend my sincere appreciation to many people who helped me with this study, both within and outside of the Department of Adult and Continuing Education. First and foremost, this project would not have been possible without the assistance of Bert Wiswell, my advisor and committee chairperson, whose investment of time, support, and expert advice helped guide me through the consulting process and develop a nebulous idea into a workable study. In his classes, I first learned about focus groups and group developmental theories. I would also like to thank the other members of my research committee, Jerry Cline and Ron McKeen. Dr. Cline's advice on qualitative research and observation techniques was invaluable during the facilitation and analysis phases of this study. In Ron McKeen's dynamic classroom, I experienced what adult education is really about and began the transformative journey that was my graduate school experience. That first class sparked my interest in the study of groups and introduced me to the concepts that were a part of this study: change theory, participatory learning, and systems thinking. I would also like to acknowledge the contributions of Marcie Boucouvalas and Harold Stubblefield to my education. Dr. Boucouvalas helped me attain a deeper understanding of myself and my relationship with others, and helped me realize that quality sometimes takes time. Dr. Stubblefield's confidence in my ability and his help in getting financial assistance made

this study a reality. I also would like to acknowledge two doctoral students in the Department of Adult and Continuing Education: Brian Abdul-Karim, for being a friend and sharing his thoughts; and Chris Hardy, who invited me to observe the process at his work place, and freely gave his time and advice.

In the Business School, I would also like to extend my sincerest thanks to Dr. Larry French, whose course on Organizational Behavior was a rich source of information; and Dr. K.C. Soares, who introduced me to the wonderful ideas of Marvin Weisbord. I would like to thank the employees in this study for their participation and commitment to the process.

I would like to thank my parents for their support. They were role models of continuing education. I can't ever remember one of them not taking a course. I owe an enormous debt of gratitude to Ginger Kazil and Lori Legg, who helped watch my children while I worked and studied.

I would like to extend appreciation to my children, who managed to grow during this process into two wonderful little people. Finally, words cannot fully express the gratitude I have for my husband, without whom I could not have finished this study. He invited me to use his workplace as the subject of my research, assisted in the arrangements, stayed up late with me to fight the computer, and supported me financially and emotionally. He saw me through many changes and stood fast.

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**CHAPTER I**  
**INTRODUCTION**

This thesis explored the differences and similarities of information and group dynamics related to variation in group composition by examining responses from four focus groups that varied in lateral and vertical heterogeneity and homogeneity. Two questions were explored in a focus group study of a multidisciplinary environmental sciences consulting company:

1: In what way does lateral (disciplinary affiliation) heterogeneity affect focus group discussions assessing organizational and learner needs?

2: In what way does vertical (hierarchical) heterogeneity affect focus group discussions for assessing organizational and learner needs in a matrix organization?

While the literature on focus groups recommends homogeneity in group composition, this assumption has not been studied when utilizing focus groups for organizational and learner needs assessment. The majority of field studies focus on personality rather than disciplinary or work role and study intact work groups instead of short-lived or temporary groups.

In this study, four separate focus groups of varying compositions met within one organization to further address the issue related to heterogeneity in focus groups for identifying organizational and learning needs. Responses were

analyzed qualitatively according to richness of responses, group developmental stages, enthusiasm of respondents and emergence of common themes, and were compared and contrasted among the groups.

The issue of homogeneity in work groups needs to be studied because of the current trend of organizations to move from specialized fields that address specific needs to multidisciplinary organizations. Increasingly, as society's problems become more complex, a multidisciplinary approach is required in problem solving. Such an approach requires that people representing a diverse array of disciplines work together.

Work groups also are becoming more diverse vertically, in that they can be composed of a variety of management and non-management staff who work together toward a common goal. Organizations are moving from traditional, hierarchical structures toward matrix or flat management structures in order to facilitate team work and client responsiveness. Because this organization operated in theory as a matrix organization, in which power is determined by client needs rather than one's position, it was considered significant to study the effect of hierarchy on group dynamics.

The current assumption that commonality in focus groups is desirable when exploring learner needs does not reflect the true makeup of an increasing number of businesses. As

problems become more complex, the composition of groups may change according to project needs. A needs analysis that categorizes or segregates individuals according to position, department and discipline may not accurately reflect the complex culture of an organization. By analyzing organizational problems according to department or function, researchers and participants may not gain a wholistic perspective or develop an awareness of need for change.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Overview

The changing nature of organizational needs, work groups and functional disciplines provide logistical challenges for researchers striving to create homogeneous focus groups in the work place as recommended in the literature. The literature from business management, training and organizational psychology propose a relationship between heterogeneity and creativity in work groups. While there is a growing body of research and literature devoted to studying the effects of heterogeneity on intact work teams, few studies focus on small, temporary groups, such as the focus group.

Findings from this study challenge some of the current assumptions about focus group composition for this type of focus group in this particular setting. As such, literature from focus group research, training, management, small group behavior and educational research is examined and synthesized for the purpose of offering a rationale supporting both the theory of heterogeneity and the approach used in this study.

### **Needs Assessment**

Witkin (1984) describes needs assessment as a systematic procedure for setting priorities and making decisions about programs and resources. Rationales for conducting needs analyses in organizational settings include the following.

1) Programs that do not consider learners' viewpoints may be inappropriate and unsuccessful (Knox, 1986).

2) Formalizing the process is important when the researcher is studying learners they have not worked with before.

3) Learners may be unaware of some of their educational needs.

4) Involving learners in decisions about their own educational needs will provide them with insights that can motivate them to engage in learning activities to meet their needs.

5) Including supervisors in needs assessment will enhance support for the program and will enable them to share valuable insights about participants' needs (Knox, 1986).

Nowack (1991) describes a true training need as a specific job task or behavior that is important but the employee's proficiency in it is low. While there are a number of different types of needs assessment, such as the skills assessment just described, the purpose of this focus group

study was to analyze the organization.

Goldstein and Gilliam (1990) note that an organizational analysis focuses on a macro level and examines the system-wide components of the organization that interact with a potential training program. This phase includes an examination of the organization's goals, climate for training, internal and external constraints present in the organizational environment, and decides whether training is the appropriate strategy to use in resolving the human resources issues facing the organization. Information is provided to determine whether there are organizational system constraints that might prevent a training program from being successful (Goldstein and Gilliam, 1990).

In addition to analyzing the organization, this is also a study of process, it asks how the organization and people in it function, and includes perceptions, experiences and interactions of people involved in the work process (Witt, 1991).

### **Awareness of Need**

Knowles (1990) believes that the critical element in a needs assessment is the learners' own perception of the discrepancy between where they are now and would like to be. The awareness of need phase of the training process may enhance enthusiasm and support for a training program by

unfreezing people's current attitudes and feelings about change in the organization (Friedman & Yarbrough, 1985).

In the change process, conceptualized as unfreeze -- change -- refreeze, the needs assessment and development of an awareness of need phase can be considered part of the unfreezing stage (Lewin, 1951).

The need for learning exists when there is a discrepancy or gap between the current situation and the desired one, caused by either change or aspiration. Change is seen as the push and aspiration the pull that can result in this discrepancy. Change, which can be technological, structural, or external, can create problems in an organization that need to be solved. Aspiration is the human tendency to grow and want more. Even if an organization is running smoothly, its leaders are rarely content. This higher level of aspiration may call for new skills and knowledge (Friedman & Yarbrough, 1985).

An awareness of need develops when people see a discrepancy between what could (or should) be happening in their work and what they are currently able to do. They welcome training once they believe that the outcomes of their work would improve if they operated more skillfully and that training can provide those skills. Otherwise, they may become resistant to an externally imposed training event. They also believe in their own ability to improve or close that gap and

in the capacity of training to help them accomplish that improvement (Friedman & Yarbrough, 1985).

This study simultaneously explored learner needs and developed an awareness of need for change among participants. While an awareness of need can be developed during a structured interview, this method can be time consuming and the interviewer uses a more directive approach than in a focus group discussion, where respondents develop this awareness on their own and the facilitator merely focuses attention and interaction on specific problems to be addressed (Byers & Wilcox, 1991).

### **Change**

Change is a process with two general purposes: maintaining the system's stability or transforming it for movement in new directions (Friedman and Yarbrough, 1985).

This approach assumes that problems with systems have multiple causes which mutually influence each other. Implications for the facilitator include:

- 1) The task is to influence the direction and rate of change, not to create it or stop it;
- 2) Trainers become part of the system and impact the system;
- 3) Each situation is unique;
- 4) A collaborative approach to change, working with



clients to understand their system and decide together on interventions (Friedman & Yarbrough, 1985).

According to Beckhard (1991), the initial diagnostic step in a change strategy concerns analyzing the need for change and determining whether they are shared in different parts of the system (Beckhard, 1991). Change can be categorized by first order and second order change. First order change occurs within a system which itself remains unchanged. Second order change is a change of the system itself. Trainers need to assess which order of change is needed and wanted by a group, decide whether training can accomplish this change and/or determine whether first- and second-order changes can be compatible (Friedman & Yarbrough, 1985).

### **Organizational Culture**

Consideration of an organization's culture is a key component of a needs analysis. Friedman & Yarbrough (1985) note that the identification and consideration of system levels and their environment is important because change at one level affects change at another and without considering systems and their levels, training may be ineffective.

**Systems**

Friedman and Yarbrough (1985) describe productive systems as open, flexible, congruent and affirming. Unproductive systems are those that are not flexible, but rather are rigid and closed, where persons do not have access to ideas and information needed to make appropriate decisions. Congruency also is important for systems to be produced: congruency involves a matching of all parts of the system in relation to purposes and action. The system has to be able to coordinate multiple resources, purposes and actions. To determine if a system is congruent, three questions need to be answered. Is the organization doing what it needs to do in order to survive and prosper? Is there a fit between the organizational structure and its purposes? Is there a fit between individuals and the organization? Systems that are affirming have three qualities: self-acceptance, confirmation and essentiality (Friedman & Yarbrough, 1985).

**Rationale for a Qualitative Research Approach**

Because the aim of focus groups is exploratory, they are considered a qualitative research method to gathering information on potential organizational and learner needs. The exploratory approach to research "seeks prescientific knowledge that is not meant to have scientific status; it is meant to be a precursor (Strauss & Corbin, 1990)." Focus group

research is based on a grounded theory approach to qualitative research (Byers & Wilcox, 1991). Qualitative methods are recommended when little is known about a phenomena and to determine the intricate details of a phenomena that is difficult to convey with quantitative methods (Strauss & Corbin, 1990).

Interest in qualitative research is building as researchers find that conventional quantitative methods are not sufficient when they need to understand the complex processes of organizations, such as learning, growth, culture, and effectiveness (Whitt, 1991) and may need to conduct a wholistic organizational analysis (Goldstein & Gilliam, 1990).

Grounded theory is designed to:

- 1) Build rather than test theory;
- 2) Provide the rigor necessary to make the theory "good science;"
- 3) Help break through biases and assumptions brought to the research process;
- 4) Provide the grounding, density, sensitivity and integration needed to generate a theory that closely approximates the reality it represents (Strauss & Corbin, 1990).

The principles of qualitative research include:

- 1) A search for understanding;

- 2) Insider perspectives;
- 3) Investigator proximity and natural settings;
- 4) Wholistic perspectives;
- 5) Context sensitivity;
- 6) Inductive analysis;
- 7) Human instruments for data collection and analysis;
- 8) An appreciation of the value-laden nature of inquiry

(Whitt, 1991).

The main objective of qualitative research is understanding, rather than identification of causes and effects. A wholistic approach is used, in which the researcher is able to see and understand the phenomena being studied as constituting a whole and complex system. Unlike quantitative research, which assumes that phenomena must be broken into their component parts, qualitative research seeks to understand the ways in which the parts come together to form a whole that is greater than the sum of those parts. In addition, nothing in qualitative research is considered extraneous or confounding as it is in quantitative research (Whitt, 1991).

Qualitative research is sensitive to the context or uniqueness of the phenomena under study. Because the researcher is unaware of all that is to be known, the use of preconceived hypotheses or explanations of what is happening is likely to inhibit consideration of all possible meaningful

events and behavior. In a qualitative research study, the researcher is a human instrument whose insights, ideas and impressions become part of the data of the study and inform the processes of data collection and analysis. Complex organizations and processes are uniquely suited for qualitative research (Whitt, 1991).

### **Focus Groups**

A review of the background, current uses, purposes, and future of focus groups will be presented. Their benefits and limitations as a research tool also will be discussed.

The use of focus groups in American industry has been growing since the 1950s, although their use in academic and public institutions is becoming more prevalent. According to Krueger, 1991, they began in the public sector, languished into disuse in the academic community and flourished in the private sector. Only during the past decade has the academic sector rediscovered them as a research method and both business and academia have contributed to its development. With their interest, academic values of quality control have resulted in procedures that improve methodology with respect to recruitment and sampling, the number of focus groups, the environment and the skills of the moderator (Krueger, 1991).

Focus groups were originally designed by social scientists as a method of nondirective individual

interviewing, which began with limited assumptions and placed emphasis on getting in touch with the reality of the interviewee (Krueger, 1991).

Currently, qualitative research interviews are frequently conducted in focus groups, in which participants meet to talk about a specific topic. These focus groups are particularly useful for obtaining information about attitudes, values and beliefs that may not be apparent in individual or observations of behavior (Whitt, 1991).

It is likely that in the future, focus groups will continue to be widely used in marketing research, but other uses will continue to emerge in organizational development, training, customer relations and employee benefits (Krueger, 1991). Peter Carlson stated in his article Hocus Focus in The Washington Post Magazine, February 14, 1993, that focus groups are charting the direction of western civilization and determine the future of just about everything (Carlson, 1993).

Considering that they are becoming more and more popular, a study examining the effects of composition and approach on the quality of this method is timely.

### **Application**

Focus groups are appropriate for needs assessment, training evaluation or as a technique for probing the intricacies of a problem (O'Donnell, 1988). For identifying

training needs, they can be used to explore the relationships between people and topics that are critical to success. In some situations the environment and interrelationships are as important as the topic of training (Krueger, 1991).

The popularity of focus groups is evident in the widely diverse fields and purposes for which they are used. Some of these include:

- \* To develop a new performance appraisal system (McCarthy, 1991; Feldman, 1991);

- \* To determine reasons for employee turnover (Foxman & Polsky, 1990);

- \* To identify why students choose a college and to identify information needs and expectations at colleges and universities (Sevier, 1989; McDermott, 1987; Bers, 1989);

- \* To provide ideas on educational programming (Hunsaker, 1991; Sink, 1991);

- \* To evaluate and identify new needs for college library services (Widdows, Hensler, & Wyncott, 1991);

- \* To survey customers about their needs in order to improve or promote a company's product or service (Farber and Wycoff, 1991; Laycock, 1991; Masiello, 1988; Widdows, et al, 1991);

- \* To assess community attitudes about the mentally ill and build a public relations program to reduce stigma associated with mental illness (Grunig, 1990);

\* To prepare employees and management for upcoming changes in the organization (Masiello, 1988);

\* To evaluate the effectiveness of a training program (O'Donnell, 1988).

Focus groups are particularly suited for the larger needs assessment which may need to involve a great number of individuals and be open-ended. To many evaluators, the initial listing of potential needs present a dilemma. How do you decide what the client's needs are? The validity of the needs assessment is dependent on the perceptiveness of the evaluator. Focus groups can help resolve this dilemma and develop the initial list of needs (Buttram, 1990).

Although surveys may answer the question how many, focus groups attempt to answer the question why. Focus groups also can be used to discover the types of questions to ask and their wording when designing survey instruments and to understand the rationale for the results of a questionnaire (Nowack, 1991).

While they have many potential uses for a variety of purposes, there has been little empirical scrutiny of the technique (Byers and Wilcox, 1991).

### **Benefits**

One of the many benefits of using focus groups is the diversity of opinions and ideas that they can yield. Buttram



(1990) found in a needs assessment study that needs generated by focus group participants tended to be more dynamic and process oriented than previous lists from surveys.

Lederman (1989) suggests five fundamental assumptions upon which focus group research is based:

- 1) People are a valuable source of information;
- 2) People can report on themselves and are able to verbalize their thoughts feelings and behaviors;
- 3) The facilitator who "focuses" the interview can help people retrieve forgotten information;
- 4) The dynamics in the group can be used to generate genuine information rather than the "group think" phenomenon;
- 5) Interviewing a group is better than individual interviews (Byers & Wilcox, 1991).

Focus groups are a qualitative research tool that can provide rich data about potential learning needs. Focus group research is both art and science, based upon well-developed principles of psychology, sociology and communication (Bers, 1989). Self-report instruments and individual interviews are two of the more popular methods of needs analysis; however, surveys are close-ended and individual interviews are time consuming and costly.

While self-report instruments can produce easily quantifiable data, they cannot adequately measure respondents' attitudes, perspectives and viewpoints. In addition, surveys

are frequently written in the language of researchers and may not reflect the perspectives of the respondents. The technical nature of survey design also can distance decisions makers and practitioners from the research population. Finally, surveys frequently consist of a majority of closed-ended items, which does not encourage respondents to explore their attitudes, perspectives, feelings or experiences in depth (Jacobi, 1991).

Relying solely on survey instruments may render incomplete information about why respondents feel or think a certain way (Jacobi, 1991). O'Donnell (1988) reports that surveys may yield inaccurate information about the usefulness and effectiveness of training. After examining information gathered from a focus group meeting, she noted that it became clear that the training did not improve job-related performance and neither was the material used in the jobs, although responses to a survey indicated otherwise.

While individual interviews in needs assessments can produce qualitative data, they are time consuming and costly to organizations. By interviewing several participants at the same time, time spent in this preliminary phase can be significantly less than that spent conducting individual interviews when the researcher desires qualitative data (Stewart & Shamdasni, 1990).

Focus groups allow researchers to observe transactions between and among participants (Jacobi, 1991). Because members

interact with one another and the moderator, the focus group offers a wealth and diversity of information, which makes them a widely used form of research in colleges and universities (Sevier, 1989). In addition, the use of focus groups instead of phone or mail surveys can make the customer "real" to the company's sales staff or customer service representatives and help build relationships with the customers (Farber and Wycoff, 1991).

Nowack (1991) suggests that the analysis of results to questionnaires probably give birth to more questions than answers, which focus groups can later clarify. They are also helpful when planning specific training objectives for specific jobs (Nowack, 1991).

Finally, their greatest advantage is that subjects can openly and in great detail discuss a particular topic and address questions and issues not previously anticipated by the moderator or research team (Sevier, 1989).

As a qualitative research method, focus groups provide several benefits over individual interviews and surveys.

- 1) Focus groups provide data from a group of people more quickly and cost effectively than if each were interviewed separately.

- 2) Focus groups allow the researcher direct interaction with respondents and respondents can qualify responses or give contingent answers.

3) The open response format of a focus group provides the opportunity to obtain data that is considered richer than if obtained by quantifiable methods.

4) Focus groups allow respondents to react to and build upon responses of other group members.

5) Focus groups are flexible; ie, they can be used to examine a wide range of topics with a variety of individuals in a variety of settings (Stewart & Shamdasni, 1990).

6) Focus group results are easy to understand. Although the data usually contain a wide range of responses, identification of issues and the reasons participants hold positions on issues is usually clear upon careful analysis. The group often stimulates recall and actuates important but forgotten personal detail (Byers & Wilcox, 1991; Stewart & Shamdasni, 1990).

7) The group setting offers release of inhibition by participants, greater spontaneity and candor, and encourages full and open expression of perceptions, experiences, and attitudes because it offers greater anonymity and security than individuals might feel one on one (Byers & Wilcox, 1991; O'Donnell, 1988).

8) A focus group can explore avenues of importance not listed on a questionnaire.

9) When little is known in advance of investigation, the focus group may provide a basis for formulating research

questions, hypotheses (Byers & Wilcox, 1991), and identify issues not anticipated by the moderator or research team (Sevier, 1989).

10) Focus groups are considered a stimulating and enjoyable process, which participants appreciate. An invitation to participate communicates to respondents that their opinions and experiences are important (Jacobi, 1991).

### **Limitations**

Because focus groups are a qualitative research method, they can present problems for researchers who want traditional standards of scientific credibility. Qualitative research seeks understanding, allows the research design to emerge, uses a human instrument to study in natural settings, and relies primarily on interviews. Replicability is impossible, the data can be misleading, and the complexity of the environment can make it difficult to accurately portray the context or environment of the study (Whitt, 1991). In addition, results can not be generalized for the larger population, but since the goal of focus groups is exploratory, the issue of generalizability may not be of particular importance. A general rule of thumb is to conduct focus groups until the same information is repeated, which usually occurs after the fourth or fifth session (Byers & Wilcox, 1991).

The use of both qualitative and quantitative methods is recommended by social sciences researchers who believe that richer and more accurate data is generated.

While there are numerous advantages to this method, there also are some disadvantages. They include the following:

1) Results cannot be generalized to the larger population.

2) Interaction of respondents with one another and with the researcher has two undesirable effects: (1) Responses from group members are not independent of one another therefore restrict the generalization of results, and (2) the results obtained in a focus group may be biased by a dominant or opinionated member; more reserved group members may be hesitant to talk.

3) The live and immediate nature of the discussion may lead a researcher to place greater faith in the findings than is warranted.

4) The open-ended nature of responses makes summarization and interpretation difficult.

5) The moderator may bias results by unknowingly providing cues about what types of responses and answers are desirable (Stewart & Shamdasni, 1990).

6) A series of four focus groups could easily cost more than \$2500.

7) The possibility of subjects conforming to group norms

is somewhat greater in a group than in the anonymous process of survey questionnaire completion (Byers & Wilcox, 1991).

8) A moderator skilled in interpersonal and nonverbal communication, and who understands group behavior is vital to the group's success (Sevier, 1989).

9) Recruiting participants who represent the populations of interest is difficult and time consuming (Sevier, 1989).

A review of research studies and theoretical assumptions about lateral and vertical homogeneity and heterogeneity from other settings is discussed next.

### **The Rationale for Homogeneity**

Similarity (or homogeneity) theory proposes that homogeneity is desirable because it evokes mutual attraction among group members whereas heterogeneity introduces tensions (Tziner, 1986). According to Lederman (1990), respondents need to share a common problem in order to feel comfortable with one another. This assumption of safety in "groups of like kind" maintains that the group needs to provide support for its members in order for them to express anxiety-provoking or socially unpopular ideas (Lederman, 1990).

Krueger (1988) also supports homogeneity because members may defer to others whom they believe to be more powerful. He uses as an example the case of a focus group of farmers, who tended to defer to the one who owned the most property.

Although they were laterally homogeneous, vertical differences inhibited the free expression of ideas (Krueger, 1988). Equity theory, which is related to similarity or homogeneity theory, proposes that tensions can arise when individuals are thought to be involved in comparing themselves to others in group meetings. Perceptions of unequal ratios is thought to induce distressful feelings of under or overreward (Tziner, 1986).

Another rationale for designing homogeneous groups is that they may be able to move through questions quickly while a heterogeneous group may labor over even a small number of questions. Generally, the more complex a topic, the more emotionally involving the topic, or the greater the heterogeneity of views on the topic within the group, the fewer the topics and specific questions that can be covered (Stewart & Shamdasni, 1990). Most of the literature on focus groups maintains that homogeneity is a standard ingredient for a successful focus group (Bers, 1989; Hunsaker, 1991; Krueger, 1988; Lederman, 1990; Byers & Wilcox, 1991).

### **Homogeneity and organizations**

There is a large body of evidence supporting the claim that similarity is the most important determinant of interpersonal attraction, which in turn creates a social context for relationships among organizational members (Jackson, Brett, Sessa, Cooper, Julin, & Peyronnin, 1991).



This theory of similarity (or homogeneity) proposes that over time, organizations create psychologically homogeneous work groups through the use of recruitment and socialization. The authors maintain that people seek membership in organizations which they believe are most like themselves (Jackson, et al, 1991).

In a study of 93 management teams in bank holding companies, turnovers for individuals was predicted by dissimilarity to other group members. Similarity was defined according to age, tenure, educational level, curriculum, alma mater, military service, and career experiences. Results to their study indicated that team members whose personal attributes were dissimilar to their teammates would be more likely to leave the team than would team members with similar personal attributes (Jackson, et al, 1991). While this study explored heterogeneity in management groups that might meet for one purpose only, it is also appropriate to this study to discuss the findings of long-term studies of heterogeneity and homogeneity, and work groups.

Tsui, Egan, and O'Reilly (1992) observed that employees tend to categorize themselves into various occupational groups and may even use the organization as a social category for self-categorization. An individual may derive positive self-identity from the group without needing to have personal knowledge of or interaction with all other members in that

category. As long as this social identity is positive, individuals may protect their group from others perceived to be less attractive.

The authors (Tsui, et al, 1992) hypothesize that these demographic attributes, such as discipline or function, may be relevant categories that individuals use to derive their self-identity in the context of a given organization. This organization or group can be an attractive psychological group to an individual to the extent that it is consistent with the categories that the individual has chosen to categorize him or herself.

In their study, the authors found that (1) individuals tend to categorize themselves into psychological groups, (2) are motivated to maintain a positive identity, and (3) seek to maximize intergroup distinctiveness to maintain a positive social identity. An individual's work unit, therefore, is a likely locus of identity. A fundamental assumption is that people prefer to be with similar others. Being unique thus may be less desirable than being one of the group and may also explain why individuals choose to conform to group norms. The negative relationship they found suggests that the desire to be similar may be a stronger motivation than the desire to be unique. Nonetheless, uniqueness could explain the favorable

attitude of women in male-dominated settings, which they found in their study, and uniqueness in occupation, which can bring high status for the individual (Tsui, et al, 1992).

### **The Rationale for Heterogeneity**

A minority in the focus group literature recommend that when the purpose of the focus group study is exploratory, rather than clinical or phenomenological, then heterogeneity can provide a diverse information base. (The exploratory approach is used to acquire prescientific knowledge, the clinical approach yields quasi-scientific knowledge by using theories to arrive at judgments and the phenomenological approach is concerned with everyday knowledge from the shared perceptions of particular respondent subgroups) (Basch, 1987). Because the purpose of this focus group study was to generate theory about the learning and work process by studying the organization's culture, the purpose of this study was more exploratory than clinical or phenomenological.

Stewart and Shamdasni (1990) also believe that differences among participants is not a cause for dismay. They simply suggest that when a group is a part of the measurement tool, considerable care must be exercised in its design and composition. In addition, they believe it may be desirable in some situations to have a group that is made up of a particular mix of people. Heterogeneous groups can be

more effective than homogeneous groups because a variety of skills, perspectives and knowledge can be brought to bear on the performance of tasks (Stewart and Shamdasni, 1990).

Individuals who are well known to one another may form small cliques within a group or reinforce the opinions of another, which may diminish the responsiveness of other group members. Homogeneity also may move the group toward a consensus of opinion more quickly than might otherwise be the case.

A group of friends may likely produce less variance in opinion than a group of strangers who might otherwise be equally homogeneous (Stewart & Shamdasni, 1990). Morgan (1989) notes that many companies discourage diversity by removing potentially disruptive elements, and selecting people who think alike. This process results in quick plans and actions, but Morgan (1989) believes that creativity thrives on the tension created by diversity.

Furthermore, the recommendation of commonality in the focus group literature may be almost impossible to obtain in a multidisciplinary company with a variety of specialists. Although this commonality might provide a more comfortable atmosphere for participants, there also might be a relationship to conformity, in which members do not wish to disagree with one another in order to maintain their feelings of belongingness to the group.

While there are few proponents of heterogeneity in the focus group literature, there are some studies of other types of groups which suggest that heterogeneity can provide a creative environment for problem solving and enhance group effectiveness.

### **Heterogeneity and effectiveness**

Reddy (1985) believes that heterogeneity of personality in sensitivity groups promotes learning, although it may also lead to more confrontation among members. Composition influences the change process in groups and heterogeneous composition leads sensitivity group members to a wider range of alternative behaviors and change (Reddy, 1975).

In an empirical study of employee involvement programs, Magjuka & Baldwin (1991) found that heterogeneity significantly improved the effectiveness of work groups. Like focus groups, the work groups studied tended to be more temporary or "project oriented in nature," however, they also tended to be much larger in size. The results of their study (Magjuka & Baldwin, 1991) indicated that design and administration of teams strongly and significantly related to their effectiveness, specifically when a team's membership was represented by diverse job functions and administrative backgrounds. Those teams with greater heterogeneity evaluated more positively the effectiveness of their team. The results

of this study indicated that when members possess diverse functional and occupational training and skills, they will evaluate more positively the effectiveness of their problem-solving efforts.

The researchers (Magjuka & Baldwin, 1991) speculated that this diversity enabled members to gather a variety and richness of information to solve complex problems, or that this diversity enabled the team to obtain better cooperation from employees who were assigned to those departments affected by a proposed solution. Members of heterogeneous teams may be more likely to draw upon experiences of employees outside the team than those belonging to homogeneous teams (Magjuka & Baldwin, 1991).

### **Heterogeneity and organizations**

As knowledge is expanding at an increasingly accelerated rate, educators are attempting to manage this information explosion by offering specialties and sub-specialties at the college and professional levels, particularly in the scientific fields. This trend toward specialization spills over into the organizational setting where companies begin to compartmentalize and departmentalize employees into specialties (Tanner & Tanner, 1980). These specialties provide challenges for management of multi-disciplinary scientific firms like the one studied who might need representatives of

different disciplines to work together and solve complex technical problems.

Masiello (1988) has observed a trend toward heterogeneity in businesses, created by a need to design cross-functional work teams, in which a diversity of specialties work together to solve customer problems. Morgan (1989) proposes that the multidisciplinary project team is the building block of organizations that are innovative and want to solve complex problems. The author maintains that it is often better to begin a decision-making process by casting a wide net, involving unusual people, exploring unusual ideas and being open to the influence of variety, rather than forcing one point of view. For diversity in groups to work, members must be able to talk to one another. Innovation is spurred by enthusiasm, strong opinion, risk taking and usually occurs in groups. These strong opinions can cause conflict, which is not necessarily overt, but lies beneath the surface. Morgan (1989) proposes a relationship between tension based on diversity and creativity in groups.

In a descriptive research study, Jackson (1991) found that reliance on internal recruitment contributed to the creation of homogeneous top management teams, which were less innovative. Barrett-Lennard (1975) promotes both diversity and unfamiliarity of group participants as ingredients for a creative group. The author notes that group members may feel

freer to express themselves and experiment in stranger groups than in groups with people they know. Diversity of broadly shared values provides the potential for breaking more new ground than homogeneity of values.

### **Creative problem solving**

Gordon, DiTomaso, & Farris (1991) have observed that technically diverse problem solving groups are more creative than homogeneous groups. When innovation is important, they recommend that companies create groups that are ethnically and technically diverse.

Hoffman and Maier (1960) found that groups composed of heterogeneous personalities produced significantly higher quality solutions to problems than homogeneous groups. Group membership was determined according to the Guilford-Zimmerman Temperament Survey. None of the homogeneous groups scored higher than the heterogeneous groups, while most of the heterogeneous groups scored higher and some equal to the homogeneous groups. Given relatively equally able people, the authors maintain that the greater the differences in perceptions among the group members, the higher the quality of their problem solving.

In addition, mixing sexes in the groups enhanced the quality of solutions to both problems, although in somewhat different ways for each problem. Mixed-sex groups tended to



produce higher quality solutions than did all-male groups. The higher quality of solutions associated with group heterogeneity was not obtained at the sacrifice of their acceptance by the group members. The authors believed that the very process by which the quality of group problem solving is improved -- by expressing differences -- is likely to enhance the acceptance of solutions (Hoffman and Maier, 1960).

#### **Summary**

As a qualitative research method to assessing learner needs, focus groups are considered an exploratory approach to examining organizational problems that easily lends itself to participants' development of an awareness of need by including them in the training process. By observing how participants interact in the group process, the researcher may gain a richer understanding of the differing viewpoints and interpersonal dynamics of an organization as well as a balanced perspective on its culture and problems than she can from a survey.

While the literature considers participant comfort level with another a key ingredient that is accomplished by group homogeneity, it may be these very similarities can limit the quality of responses. The diverse nature of heterogeneous groups may actually enhance group discussion by providing an

environment where participants learn from others' experiences, begin to understand their perceptions and improvise on each other's ideas.

This review has provided a literature-based rationale for focus groups as a qualitative research method to assess learner and organizational needs. In addition, assumptions and empirical studies on homogeneity and heterogeneity in a variety of groups and settings have been presented. The rationale for methods used in this study follows.

## **CHAPTER III**

### **METHODS**

#### **Overview**

This study had two purposes: a research purpose and an organizational purpose. The research purpose was to study the effects of lateral and vertical heterogeneity on both the group process and quality of results. The organizational purpose was to assess organizational and learner needs (as opposed to a task analysis or person analysis). An organizational analysis utilizes a systems-wide approach to examining the organization and its goals, climate for training, and internal and external constraints (Whitt, 1991). The approach for satisfying the organization's research goals is first discussed.

#### **Rationale for approach**

The rationale for conducting an organizational training needs assessment is to determine whether or not training is the appropriate intervention and to gather information that might prevent any training intervention or change from succeeding. In addition to conducting an organizational assessment, questions on knowledge, skills and abilities needed to be effective in this company were asked (Goldstein and Gilliam, 1990).

Because the purpose of this focus group study was to generate theory about the learning and work process by studying the organization, this study was considered exploratory. Heterogeneity can be considered an advantage, according to Basch (1987), because it provides the diversity of viewpoints that enhance an exploratory research project.

Research design of a qualitative research study requires flexibility because the researcher cannot specify in advance all data sources or interview questions or even a complete research plan (Whitt, 1991). In this study, for example, the interview guide became what is known as a "rolling interview guide" (see Appendix A), that is, it changed in response to new information given by each group. Because qualitative research is conducted in natural settings (as opposed to a laboratory), the emergence of information about the phenomena guides what further information is sought and in what ways. All plans are subject to change during the course of the research. This approach demands tolerance for uncertainty and ambiguity from the researcher (Whitt, 1991).

### **Research process**

The approach utilized in this study included: management interviews, submission of organizational proposal, analysis of research site and front end analysis of problem, submission and approval of research design, development of an interview

guide, logistical and administrative arrangements, composition and design of groups, moderating focus group discussions, transcribing tapes, analyzing group process, and writing report with executive summary.

### **Description of setting**

During an interview with the president, I asked questions on the organization's mission, culture, structure and current problem. The significant and relevant events leading to the current situation also were discussed. In addition, the management manual and business plan were key resources to determining organizational goals and structure. To meet confidentiality requirements, the name of the company and participants in the study have been changed.

ENVIRONMENTAL CONSULTING is a multidisciplinary organization committed to providing environmental solutions to business and industry. While other environmental companies contract to EPA and local environmental agencies, ENVIRONMENTAL CONSULTING has focused on the industry sector in order to avoid potential conflict of interest issues. In order to facilitate industry compliance with environmental regulations, ENVIRONMENTAL CONSULTING actively seeks out and researches new concepts and procedures to decrease compliance costs of client groups.

## Structure and Culture

Management at ENVIRONMENTAL CONSULTING described the organization as having multiple organizational levels. This is defined by Friedman and Yarbrough (1985) as intact work groups or people who are interdependent with each other and span hierarchical and/or horizontal levels in an organization.

ENVIRONMENTAL CONSULTING has its main headquarters in Northern Virginia and a branch group in Central Virginia. For the purposes of this research, I focused on the main headquarters so that members of all groups would be of the same organizational culture. The branch office was excluded from the study because the culture was different than the one in Northern Virginia. The departments and their directors follow.

- \* Larry Sanders, President
- \* Remediation Services and Research, Mark Benson,  
Vice President and Director
- \* Environmental Services Department, Robert Moore,  
Director
- \* Engineering Department, Kevin Jones, Director

Mid-level managers (included in the study)

- \* Laboratory Services, Tim Scott, Manager
- \* Quality Assurance and Health & Safety, Anna Baker
- \* Project manager, Environmental Sciences, Mike Ritter

- \* Manager, Latin American and Caribbean Program and research chemistry support, John Perez

Departments included: Engineering, Research and Development, Environmental Sciences, Laboratory Services, Field Support, Latin American Marketing, and Administration. Environmental Sciences, Research and Development and Laboratory Services are closely related to one another, while Engineering, Administration and Field Support were more autonomous.

Fields represented by ENVIRONMENTAL CONSULTING' staff include chemistry, biology, soil science, agricultural science, hydrogeology, geology, civil engineering, chemical engineering, mechanical engineering, engineering geology, environmental engineering, environmental science, limnology, and microbiology. In terms of educational level, 9% have doctoral degrees, 27% have master's, 43% have bachelor's degrees. Employee positions are described as follows: Staff levels range from 1-4 and Senior staff (management) levels range from 5-7.

The focus group sessions were conducted at the work site in Northern Virginia, as recommended in the literature (Widdows et al, 1991). The conference rooms were equipped with rectangular or oval tables, flipcharts and were private. Two-way mirrors, videotapes and observers were not included in this study. (See Appendix B for complete description of research plan, logistics, and letter to the president).

**Pre-Assessment Interview**

In the initial interview with the president, we discussed the purpose of the needs analysis, problems of organization, ENVIRONMENTAL CONSULTING' support of the study and logistical requirements such as meeting rooms, dates/times, time tables, types of training ENVIRONMENTAL CONSULTING can support, rationale of procedures (see Appendix C).

In the interview and the business plan and management manual, Mr. Sanders described the organizational structure as both hierarchical and matrix. The purpose of the hierarchical structure was to help maintain division of work and employee accountability. The matrix form of management was based on sharing of personnel resources to facilitate completion of projects as needed. Staff may work on several projects simultaneously and report to different managers and directors.

Mr. Sanders stated that environmental, laboratory and field groups work well together, but that engineering appeared isolated departmentally, which he attributed to their training at the university level.

The nature of engineering as a discipline, he believed, conflicted with an interdisciplinary approach to problem solving. He believed that as a science, engineering was too structured, that the engineers lacked an understanding of the nature of environmental work, and were resistant to developing



new concepts and procedures. He also excluded engineering from his marketing strategy in South America. The World Bank was requiring underdeveloped nations to have environmental strategies in place before obtaining loans. While these countries were seeking consultants to help them solve their environmental problems, they were also doing so in the most cost effective manner. Mr. Sanders believed that engineers do not actively seek cost-effective alternatives, have a narrow approach and do not fully understand the mission of ENVIRONMENTAL CONSULTING.

One of the reasons he designed the hierarchical structure of his organization was to better delegate responsibilities. In addition, he does not like interpersonal conflict in his organization. For example, two women in his office complained to him that his marketing team made inappropriate remarks that they considered offensive. He responded that they should have confronted the individuals themselves and complained to their supervisors.

#### **Description of Problem**

At the time of my interview with Larry Sanders, the overwhelming challenge that the company was facing was the possible loss of a multi-million dollar, multi-year remediation contract. At the end of the study, the client organization replaced ENVIRONMENTAL CONSULTING with another

environmental contract group.

The sequence of events leading to the current situation follows:

ENVIRONMENTAL CONSULTING began in 1985 with six personnel. Once the contract was awarded, it experienced rapid growth to include six departments and two headquarters.

Engineering expertise was required on the new contract and a hunt began for engineers with appropriate experience. In the interim, Mr. Sanders hired a team of subcontractors, who never signed his contract and then withdrew before completion of their work. Next, he hired two engineers to oversee site management, but later realized they were underqualified. In the meantime, important deadlines were missed.

To correct this problem, in 1991 he hired Mr. Moore, a scientist, as project manager and director of environmental services. Deadlines were met and the client and EPA were satisfied. Late in 1991, a procedure was put in place on site according to recommended specifications by the state and authorized by EPA. The EPA official, whose responsibility was to ensure EPA specifications were followed, claimed the procedure was unapproved, immediately closed the site for several weeks, and recommended that the client remove ENVIRONMENTAL CONSULTING as the contractor.

In the meeting that followed, ENVIRONMENTAL CONSULTING proved the procedure had been approved by a previous EPA

official who was no longer associated with the project, demonstrated their increased efficiency over the past six-nine months and presented future plans and possible options for the project. Regardless, the client made a decision to remove ENVIRONMENTAL CONSULTING. Mr. Sanders believed that the EPA official was responding to criticism from his superiors over his mismanagement of this and other sites and decided to shift attention from himself to ENVIRONMENTAL CONSULTING. Currently, Mr. Sanders was seeking legal recourse and applying political pressure to regain the contract. ENVIRONMENTAL CONSULTING began downsizing at the beginning of the study.

#### **Purpose of study**

For the purpose of formulating initial plans for the focus groups, a force field analysis was done (Baker & Paris, 1975) (see Appendix D. Force Field Analysis). A force field analysis also was done upon completion of the study, from which categories were developed for presentation to management in an executive summary and report (see Appendices E and F).

According to O'Donnell (1988) the planning phase of the focus group study process produces three products: a statement or definition of the problem, an identification of the participant population, and an interview guide for leading the group discussion. After interviewing the president, the purpose of the study became two-fold: to assess employee

morale and to analyze the organizational learning environment. Krueger (1991) notes that in some situations, organizations need to make extra efforts to obtain insights and comments from employees. The purpose of focus groups in this instance is to identify concerns in worker relations. Concerns can fester and grow out of proportion despite the best efforts of employee-relations professionals.

#### **Development of Interview Guide**

Using information from ENVIRONMENTAL CONSULTING' business plan and the interview with Mr. Sanders, an interview guide was developed (see Appendix A). The purpose of the interview guide was to provide open-ended questions that initiated and encouraged discussion within the focus group. The interview guide provides structure for the group meeting, enabling the moderator to keep the group focused on the purpose of the meeting. This guide also evolved over the course of the focus group study, so that it became a "rolling interview guide," in which it adapted to reflect new information (see Appendix A).

The introduction of the interview guide defined the purpose of the focus group and created an environment that was conducive to group discussion by noting that all responses remained confidential, all viewpoints were sought, and encouraged members to not discuss the responses outside the group meeting.

Questions began with open-ended general questions about the organization to encourage discussion and then moved toward more specific questions to focus discussion on relevant issues.

### **Focus group composition**

Group assignments were made laterally according to educational discipline and departmental assignment and vertically according to hierarchical position within the company. Only mid-level management personnel with supervisory roles were included. Because we did not want direct reports in group meetings with supervisors, we had to exclude upper level management from the focus group study and interviewed them separately. Group composition and identification follows.

Group A: This homogeneous group included staff-level engineers, two chemical and two civil engineers, and is referred to as the homogeneous group, both laterally and vertically. This group was composed according to literature recommendations based on similarity theory.

Group B: This group is homogeneous vertically (all staff level employees) and heterogeneous laterally (represent different disciplines and functions within the company). Their departmental functions included: administration, marketing support, laboratory staff chemist, and field operations.

Group C: This group was a laterally homogeneous and

vertically heterogeneous group of chemists who worked in the environmental sciences area (laboratory, research and development or environmental sciences). Functionally, they performed chemistry-related duties either in the laboratory, as a researcher or as a consultant. The two mid-level managers were the laboratory services department manager and the director of the Latin American program who performed research, marketing and environmental consulting duties. One of the staff-level chemists had worked originally in the lab, then research and development and now in environmental sciences, where she was frequently asked to assist in these other departments on an as needed basis. The other staff level chemist was assigned to research and development, but also was given an opportunity to work in environmental sciences and the laboratory. The small size of the organization presented difficulties in arranging groups of people who could meet the criteria of both lateral and vertical diversity or who were assigned to only one departmental role.

Group D: This laterally and vertically heterogeneous group included: A mid-level environmental sciences manager, the quality assurance and safety manager, a field support staff member and a laboratory chemist. Disciplinary fields represented hydrogeology, geology, chemistry and construction experience.

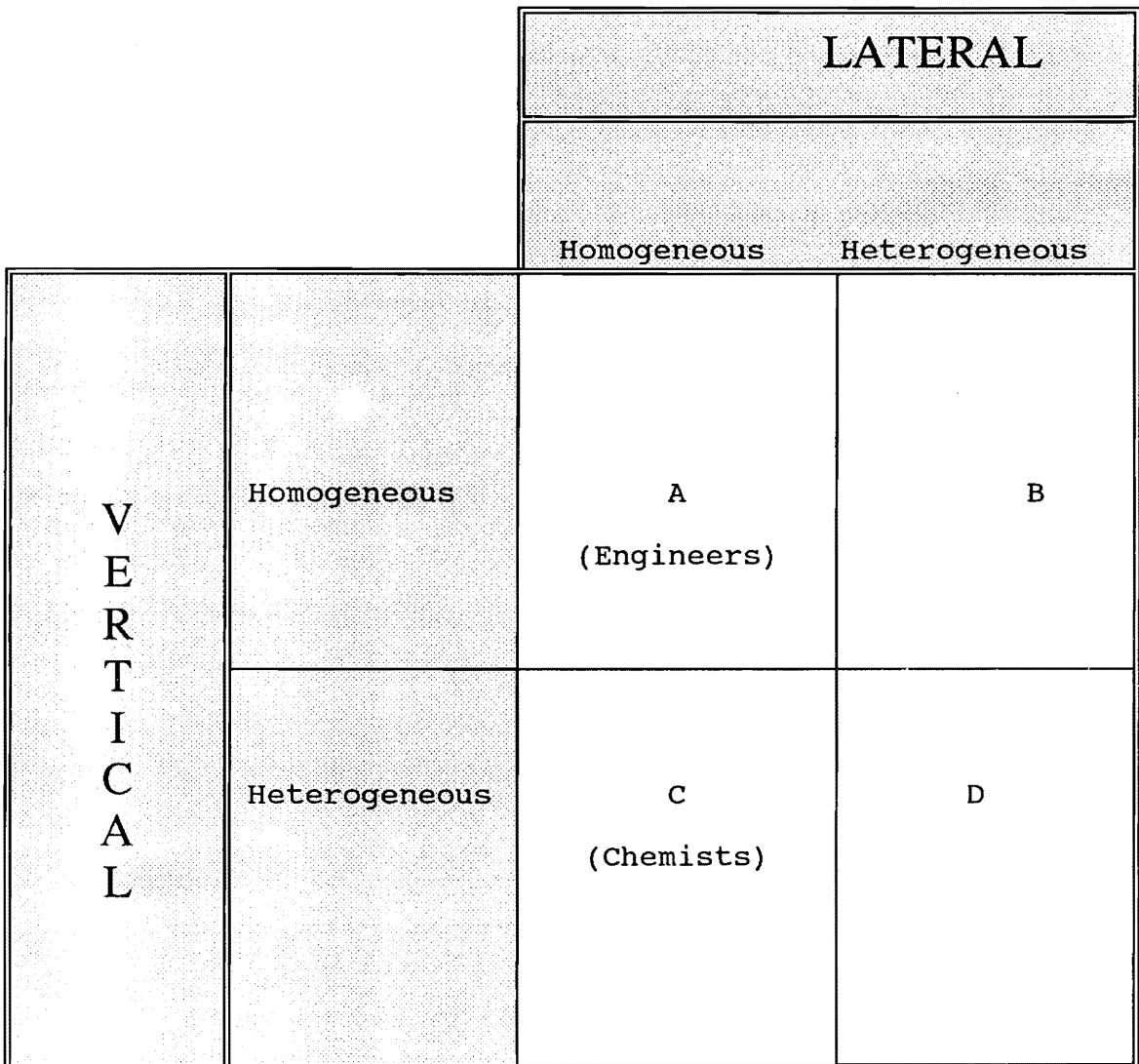


Figure 1. Diagram of Group Composition

**Cultural and gender heterogeneity**

This study did not examine other variables of heterogeneity such as cultural and gender diversity. Each group, except Group B (laterally heterogeneous and vertically homogeneous), had one member of an ethnic minority. Groups B and C (laterally homogeneous and vertically heterogeneous) were composed of two women and two men. Group A was all male and Group D had one female manager and three males.

Gender was not considered a significant influence in this study based on recent research indicating changes in societal attitudes about women in leadership roles. Webber (1987) maintains that societal attitudes about women in leadership roles in groups has significantly affected both male and female perceptions. He conducted a study comparing attitudes in the early 1970s to those in the mid-1980s in intact college work groups. He found that women were assuming leadership more than they did previously and that their leadership roles were accepted by both males and females more than they were in the 1970s.

**Focus group size**

The focus groups were composed of four people because the organization is small. The literature recommends groups include six-eight participants; however, when issues are



considered complex, small numbers can be used effectively (Krueger, 1988). While group productivity increases with size (Renuzulli, Owen, Callahan, 1974), some research indicates that smaller groups work with greater speed, have greater member cohesion, and are more productive (Wheelan and McKeage, 1993). In addition, the literature suggests that groups of even numbers, such as used in this study, have a higher propensity for disagreement than groups of odd numbered participants. Findings indicate that smaller groups are more inhibited in expressing dissatisfaction and disagreement, but give individuals more opportunity to interact and exhibit leadership behavior (Thomas and Fink, 1963).

#### **Development of Trust**

Stewart and Shamdasni (1990) note that the usefulness of focus group data is affected by how comfortable participants feel about communicating their ideas. Developing an environment conducive to trust among the participants was created by the following methods:

- 1) Guaranteeing anonymity of responses by memorandum prior to the meeting. This could not, however, prevent focus group members present from discussing the meeting with others outside the meeting.

- 2) During introductory remarks, I emphasized the need for respondents to be forthcoming, that ENVIRONMENTAL

CONSULTING' support of this endeavor indicated management's desire to consider differing perspectives and information relevant to problems in the organization to effect needed changes.

3) Management in the heterogeneous group were encouraged to consider other viewpoints and asked not to share responses outside the discussion meeting.

### **Facilitation approach**

In order for participants to determine the issues they think most important, it is essential the facilitator adopt a different role than the traditional interviewing style -- one that is less directive. Developed in the 1930s, these non-directive interviewing procedures began with limited assumptions and used open-ended questions in the early stages of the use of focus groups in organizations, the military and psychotherapy (Krueger, 1991).

Consistent with a non-directive interviewing approach, Friedman and Yarbrough (1985) recommend during the learner needs analysis stage of the training process that trainers adopt an empathetic or receptive approach to learners' viewpoints while providing constructive confrontations to focus their attention on data suggesting that change is needed. In this role, the trainer acts as a catalyst, balancing sensitivity to learners' frame of reference and

stimulation to enhance their enthusiasm about the potential benefits of a training session.

Byers and Wilcox (1991) believe that good group interviews are objective, reliable and valid. In order to promote objectivity (avoidance of bias from the interviewer and client), the moderator refrains from contributing to the discussion as much as possible and monitors his or her actions carefully. Since the goal of focus group research is to generate hypotheses rather than assert their representativeness, the question of reliability becomes less important (Byers & Wilcox, 1991).

#### **Criteria for facilitator**

In addition to facilitation style, experience is considered important, but Grunig (1990) believes that there is no real substitute for practice. By following the steps recommended in the literature, she claims a novice moderator can conduct focus groups with confidence.

Byers and Wilcox (1991) recommended 10 essential ingredients for a successful focus group:

- 1) A clearly understood objective
- 2) Homogeneity
- 3) Good recruiting
- 4) Good atmosphere
- 5) A moderator who listens

- 6) A well-prepared moderator
- 7) Free-flowing dialogue
- 8) Restrained group influence
- 9) Skilled analysis
- 10) Competent researchers.

These recommendations were addressed in this study by the following:

1) The organizational objective of these focus groups was to assess employee learner and morale needs by discussing problems inherent in the organization, its culture and structure.

2) The purpose of this research study was to explore the issue of homogeneity in focus groups, therefore the groups were composed of various degrees of heterogeneity.

3) A purposive sample was selected, according to lateral and vertical heterogeneity.

4) The moderator addressed issues of confidentiality both in the memorandum and introduction to the group and encouraged frank discussion of the organization's problems during the group meeting by controlling dominating forces and encouraging reticent respondents (see Appendices A and B). Although summaries of the data were provided to management, participants were not identified by name, position or any other means. Audiotapes remained in possession of the moderator and were not shared with management as well. All of

these issues were addressed in the introduction of the interview.

5) Using techniques suggested in the literature, the moderator focused participants on issues relevant to the research question while allowing open-ended discussion of organizational problems (Ringo, 1992).

6) An interview guide enabled the moderator to ask questions that focused on relevant problems in the organization but were also open-ended to encourage discussion.

7) The structure of the interview flowed from general questions to encourage discussion to more specific ones to focus the contribution of ideas.

8) The moderator refrained from participating in the discussion and attempted to control distracting comments or participants who dominated the discussion.

9) Discussion groups were tape recorded and transcribed for qualitative analysis.

10) Groups were analyzed according to their composition and quality of discussion. Group dynamics were analyzed according to their progression through group developmental stages, development of an awareness of need for change, observations of trust and conformity, and quality of ideas.

**Group selection and facilitation**

A purposive sample was selected and those participants notified by memorandum (see Appendix E. Memorandum) of the upcoming meetings and their group assignment, that the session would be audiotaped for the moderator's use only and management support of this study (see Appendix F. Memorandum of Support). All participants were aware that they were part of a research study for the purposes of both the organization and the researcher. At the end of the focus group meeting, participants were made aware that the research was a study of the effects of group composition on focus group discussion.

Groups met in separate 2-3 hour sessions to discuss and assess organizational and learning needs in the organization in a conference room at ENVIRONMENTAL CONSULTING. Sessions were audiotaped for data collection purposes only; participants' names remained anonymous and confidential. They also were asked to provide feedback to the moderator on the process (see Appendix G. for results). ENVIRONMENTAL CONSULTING received an executive summary and detailed report and recommendations at the end of the study (see Appendix H).

### **Analysis of Results**

Whitt (1991) recommends that researchers collect data and analyze findings simultaneously. Procedures typically used in inductive analysis of qualitative data include organization of data; generation of categories and themes; testing of emerging hypotheses against the data; seeking alternative explanations for data by challenging the themes that seem to be emerging, and writing a report of the findings (Whitt, 1991).

#### **Organizational report**

O'Donnell (1988) and Bers (1989) recommend completely transcribing the group meeting for a more objective perspective, which was the approach used in this study. Categories and subcategories of information were developed for inclusion in an executive summary and detailed report to management, as recommended by O'Donnell (1988) and Bers (1989) (see Appendix H). This executive summary also included recommendations that considered the participants' needs, understanding of the current problem, and the organization's culture and structure in an executive summary and categorical report.

Learner needs and recommendations to address the current situation were also included, keeping individual responses anonymous. The names of group participants, the company and management were all changed for this study as well. In

addition, the researcher did another force field analysis of the current problem using data gathered from the focus group meeting (See Appendix I).

### **Group dynamics**

The focus group discussions were contrasted among all four groups in terms of richness, emergence of themes and differences in perspectives. Discussions were tape recorded, responses transcribed and the moderator developed a report on observations of behaviors made during the meetings (see Appendix J). The data was then analyzed using categorical and thematic methods.

Four groups were qualitative analyzed for categorical themes, group developmental stages, idea generation, conformity, trust and development of an awareness of need for change.

### **Group developmental stages**

The theory of group developmental stages proposes that there are five stages groups might experience: orientation, dissatisfaction, resolution, production and termination, or more popularly referred to as forming, storming, norming, performing and adjourning (mourning) (Tuckman & Jensen, 1977). Certain environmental factors may affect the development of these stages or even inhibit them.



In the Forming stage, personal relations are characterized by dependence, with serious topics and feelings avoided. Discussion focuses on defining the scope of the task and similar concerns.

During Storming, the group process is characterized by competition and conflict. Individuals have to bend and mold their feelings, ideas and attitudes to suit the group organization. Discussions focus on responsibilities, rules, rewards and evaluation, reflecting conflicts over leadership, structure, power and authority.

During the Norming stage, interpersonal relations are characterized by cohesion, with members acknowledging contributions, community building, and solving of issues. They share feelings and ideas, solicit and give feedback and explore actions related to the task. Creativity is at its highest at this stage. A drawback is that members may resist change of any sort.

The Performing stage is not reached by all groups. This stage is marked by interdependence in personal relations and problem solving in the realm of task functions. Individual members are self-assured and the need for approval is past. Members both task and people oriented, and they have a sense of group identity. The task function becomes genuine problem solving.

Mourning (or adjourning) involves the termination of task

behaviors and disengagement from relationships. Concluding can create some apprehension. The termination of the group is a regressive movement from giving up control to giving up inclusion in the group.

While the storming stage is characterized by some unproductive behaviors, group developmental theory proposes that it is necessary before members can move toward norming and performing. Without this storming phase, members are not comfortable enough to risk expressing differences of opinions, feelings, beliefs (Tuckman & Jensen, 1977). This study examined the theory that this diversity of opinion can provide richer group discussions and creative brainstorming than the more comfortable, homogeneous groups recommended by the focus group literature.

### **Conformity**

The groups were also analyzed for evidence of conformity. Conformity is described as a change in behavior or belief as a result of real or imagined group pressure (Tubbs, 1984). The literature indicates that group pressure produces conformity, yielding can be induced even on attitudes with personal relevance to them, yielding is greater on difficult decisions than on easy ones, there are differences in amounts of yielding for different individuals and when subjects are tested again without the group pressure, a major part of the

original yielding disappears (Tubbs, 1984). Situational variables that affect conformity include ambiguity or difficulty, status, power or competence, observable unanimity of attractive others and appropriateness of the act of conformity to achieving a desired goal (Hollander & Willis, 1967).

Nonconformists in a group setting get more comments directed toward them as these variables increase: 1) relevance or importance of the topic, 2) degree of group cohesiveness and 3) degree to which the person deviated. After approximately 45 minutes, nonconformists tend to be ignored. There are four stages of conformity pressure: 1) reasoning, 2) seduction, by appealing to social needs, 3) coercion, and 4) isolation. The results of conformity in groups is group think, which is characterized by: an illusion of invulnerability, collective efforts to discount warnings, an unquestioned belief in the group's morality, stereotypical views of enemy leaders, direct pressure on members who argue against the group's stereotypes or illusions, self-censorship of deviations from group consensus, shared illusion of unanimity, emergence of self-appointed mind guards who protect the group from adverse information (Tubbs, 1984).

It is clear that too much conflict can induce strong negative feelings and aggressive action in groups. Less obvious but true is that too little conflict can induce

conformity. Moderate levels of conflict, which are associated with high levels of energy and involvement, high degrees of information exchange and better decisions, are recommended.

### **Trust**

Because the quality of group discussion can be measured by the degree to which members share and express their ideas, feelings and beliefs with one another, successful group functioning depends on openness and development of a climate of trust (Golembiewski and McConkie, 1975). The development of trust of the group members was analyzed in this study by the degree to which they shared personal feelings with one another.

As members of a team risk sharing information, a norm is established that risks can be taken without ridicule or punishment; therefore a relationship exists between trusting and risking in the group environment. Furthermore, the authors maintain that no single variable influences interpersonal and group behavior as does trust. They believe that low trust induces defensive behavior, the basic block to any learning, and that there is a relationship between trusting and risk taking. Essentially, they propose that trusting behavior begets trusting behavior and mistrusting behavior begets mistrusting behavior (Golembiewski & McConkie, 1975).

The Johari Window, shown on the following page, is a

model of disclosure in the group process, illustrating how we give and receive information about ourselves and others. The purpose of developing trust in groups is to increase the arena and decrease the facade in the model (Hanson, 1973).

## SELF

GROUP	Things I Know	Things I Don't Know
Things They Know	Arena	Blind Spot
Things They Don't Know	Facade	Unknown

**Figure 2. The Johari Window (Hanson, 1973)**

### **Limitations**

The unique nature of the environment of this study limits generalization of the findings to other settings. In addition, other variables, such as gender, age, race, and tenure were not controlled. Another limitation to this focus group study was lack of formal training and experience of the moderator, although Grunig (1990) maintains that even a novice moderator can conduct a focus group provided they follow the process as recommended by the literature. Regardless of experience, the moderator must be skilled in developing rapport and facilitating group discussion that does not lead respondents toward issues and keeps the group focused on relevant issues. Leading or interfering with the natural flow of ideas may interfere with the results (Grunig, 1990). While this is a consideration, it should be noted that focus groups frequently are led by untrained moderators (particularly in the early stages of the development of this method), there are few businesses that offer these services and those that do are expensive and address marketing research methods only, and there is an abundance of literature on facilitator techniques that enhance focus group discussion. The researcher in this study was a graduate student in adult and continuing education.

Another limitation was that the facilitator's husband was

a director in the company at the time of the study. He was not included in the focus group discussion, and this was addressed in the interview guide introduction which guaranteed confidentiality and anonymity during the focus group meeting.

Focus groups are a qualitative method; therefore, results do not represent the perspectives of the larger population. This study, however, included a majority of the company's employees. Themes and issues that were repetitive were considered significant.

Because of the complex and diverse array of specialties, homogeneity was defined by discipline, but not by sub-specialty. For example, the engineering group consisted of chemical and civil engineers. Chemists can be environmental, analytical or aquatic. Variables such as function were considered more significant in the design of group composition than sub-specialty. Some employees were shared among departments, making categorization by departmental affiliation difficult, such as in Group C. The chemists worked in different departments, rotating as needed. Other issues such as advanced degrees, years of experience, age, gender, culture and race also were not considered. In addition, management did not necessarily have more experience or education than staff level personnel, since skills at administration, negotiation and personnel management were considered more crucial for higher level positions than technical expertise.



The small numbers of participants in the focus groups also may have been a limitation. The literature recommended six-eight participants, but allowed for smaller groups when problems were considered complex as they were in this organization. Four members to each group might have increased the probability of pairing.

The organization also was in a state of change, which may have affected the quality of responses from the focus groups (see Appendix K. Critique of Process for assessment of focus group study as an intervention). Group dynamics and information might have been different for a task analysis study than for this study, which was an organizational analysis.

## CHAPTER IV

### RESULTS AND DISCUSSION

The results indicate that lateral heterogeneity enhanced the quality of focus group discussion, which was research question 1: In what way does disciplinary or functional heterogeneity affect the quality of focus group discussions?

Vertical heterogeneity was found to adversely affect the quality of focus group discussions, which was research question 2: In what way does vertical heterogeneity affect the quality of focus group discussions?

#### Method of Analysis

In this study, quality was based on the following:

- \* Quality of ideas generated during discussion
- \* Expression of trust and openness
- \* Progression and development of Group Developmental Stages
- \* Degree of conformity
- \* Influence of pairing on the group process
- \* Degree of participation from group members
- \* Expression of an awareness of need for change
- \* Influence of individual issues on the group process.

Each of group's transcripts was analyzed according to group developmental stages and the parameters listed above. An example of Group B's analysis is given in Appendix L.

According to quality as defined in this study, groups were rated from highest quality to lowest: 1) Group B: laterally

heterogeneous and vertically homogeneous, 2) Group A: homogeneous, 3) Group C: laterally homogeneous and vertically heterogeneous, 4) Group D: heterogeneous.

### **Results of Group A: Laterally and vertically homogeneous**

#### **Quality of idea generation**

This homogeneous group of civil and chemical engineers approached group discussion in a linear manner. In addition, most of issues that were discussed came in response to a moderator-directed question, rather than emerging naturally as part of the group discussion.

In this group, most issues were brought up by questions from the moderator. In addition, the moderator began the focus group with a broad, open-ended question "What do you see being the major challenges that ENVIRONMENTAL CONSULTING is facing today?" The homogeneous group of engineers began discussing communication, and then responded to the moderator's next question. They approached the focus group meeting in a linear fashion, differently than the heterogeneous group which will be discussed in the next section.

The following table illustrates the ideas produced in the group meeting. This group emphasized communication, resources and workplace learning during their meeting.

Table 1. Group A Identification of Needs

## Laterally and vertically homogeneous

Workplace Learning

- No building of knowledge due to emphasis on new projects
- Hire outside specialists for training in specialized areas
- Need to provide transitional training when projects passed from 1 group to another
- Need to train staff on marketing & marketing strategy
- Need for in-house seminars
- Need for mentoring system for new hires
- Current learning by mistakes increases frustration
- Need to train staff on state regulations and forms
- Need to train staff on computers
- Need communication training
- No building of knowledge due to emphasis on new projects
- Hire outside specialists for training in specialized areas
- Need to provide transitional training when projects passed from 1 group to another
- Need to train staff on marketing & marketing strategy
- Need for in-house seminars
- Need for mentoring system for new hires
- Current learning by mistakes increases frustration
- Need to train staff on state regulations and forms
- Need to train staff on computers
- Need communication training

Table 1. Group A Continued

Morale

- Uncertain about security/future of company due to loss of LA Clarke contract
- Some work harder than others
- Some employees need supervision: "goofing off" affects morale of others
- Some staff need motivation & direction
- Some departments are left out
- Poor morale fosters rumors
- Staff compete to get work/samples done
- Unfair salaries
- Staff, not mgmt, held responsible
- Staff anticipate cutbacks
- Some departments are not held accountable for making a profit
- Need to increase morale-boosting activities
- Company not serious about engineering
- Engineers have to "bail out" other departments
- Chem engineers more important than civil engineers

Business Planning

- Need to replace LA Clarke with another large contract
- Need to hire biz admin mgr
- Missed deadlines due to lack of planning
- Too many short notices
- Mgmt needs to communicate future strategy to staff
- Need better short-term planning intra- and inter-departmentally
- Need better long-term planning
- Need to reassess goals of lab, equipment
- Need integrated biz goals & objectives that includes engineering

Table 1. Group A Continued

Resources/Support

- History of extravagant spending
- Unnecessary field, computer and office equipment
- Unfair salary raises to a few
- Mgmt lack biz skills
- Mgmt not attune to costs
- High billable rates: Too many management
- Purpose of R&D unclear
- Need admin person to track resource allocation
- Need computer networking
- Unfair equipment allocation
- Departments compete for resources
- Wasteful to have technical staff doing field work
- Lab seen as unprofitable
- Need to invest in lab for it be competitive
- Need to price new projects along a learning curve
- Innovative ideas need financial support
- Computer marketing system not used
- Need to save overhead costs
- Staff need access to in-house specialized computers currently not used

Processes/Procedures

- Engineers follow procedures, others don't
- No follow through
- Unclear who is project mgr
- Need more structured processes for new hires
- Engineers called in at last minute
- Need better project mgmt
- Need to develop marketing schedule and process to eliminate double marketing
- Lab needs better planning
- Lab billing system unclear
- Need to pre-plan
- Chain of command unclear
- Need more structured processes

Table 1. Group A Continued

Marketing

- Former marketers seen as incompetent
- Like engineering marketer
- Engineering marketer also needs to market civil engineering, not just chemical
- Need to train staff in marketing
- Mgmt not explicit about who is to market
- Try to sell outdated or unproven technology/services
- Engineers left out of multidisciplinary marketing projects
- Need to create marketing teams
- Need integrated marketing approach
- Staff need to understand company niche in order to market
- Need for senior managers to support/train marketing teams and staff rather than market themselves
- Engineering marketing focus on chem engineers, not civil engineers
- Civil engineers need experience in marketing
- Need to let engineers lead multidisciplinary marketing projects more often
- Time needs to be allocated for marketing
- Need to focus less on new projects in order to build learning base

Table 1. Group A Continued

Management Approach

- Need to delegate more
- Some hide from problems
- Not proactive in meeting deadlines & dealing with rumors, conflict and problems
- Procrastinated too long in laying off former marketers
- Conflicting directives from different managers: need to agree on approach
- Need to supervise employees who are not busy
- Some not working hard enough
- Some overworked
- Too many managers
- Need to meet with each other and staff more often
- Need to tell staff truth about company
- Not attune to costs
- Mgmt not held accountable
- Need to address employee morale problems
- Handled layoffs of marketers well("they just disappeared")
- Mgmt assign staff projects they don't understand themselves
- Make impulsive decisions
- Do not consider learning curve when pursuing new projects
- Want to do everything in-house instead of bringing in outside help
- Mgmt needs to get more involved in hands-on work
- Not serious about supporting innovative ideas from staff
- Not willing or too busy to help new hires



Table 1. Group A Continued

Communication

- Closed door meetings foster rumors
- Need better interdepartmental/intradepartmental comm
- Headquarters & satellite offices need to meet more often
- Some departments excluded from meetings and projects they work on
- Different directives from different managers: need to agree on an approach
- Need management to meet with each other and staff more often
- Closed door meetings foster rumors
- Mgmt needs to be proactive in stopping rumors
- Staff depend on rumors for information
- Need to communicate future plans for company
- Mgmt needs to be more explicit
- Need written meeting minutes
- Need to follow up meetings
- Need to understand the branch office's capabilities
- Need to eliminate "double marketing"
- Need to communicate long-term plans
- Need to communicate company focus
- Don't know who does what
- Some meetings are a waste

External context

- Loss of major client biggest problem
- Company grew too quick in response to 1980s growth in
- History of being "burned" by outside consultants

Advantages

- Creative group of people
- Open supervision
- Mgmt highly competent in fields
- Engineering marketer seen as a positive force industry

### **Trust and Openness**

While the literature recommends homogeneity in order to enhance trust among discussants, in this study members of the homogeneous group indicated they did not trust one of the members, which probably significantly affected the quality of the group meeting.

Prior to the meeting, the moderator contacted members of the group to ask if they had any questions about the upcoming meeting or any time conflicts. Three of the members expressed concern about the fourth member keeping information confidential. One of the members stated that the fourth member associated himself closely with the department head and disclosed personal and confidential information about the other members of the department in order to promote himself.

I attempted to address this issue by discussing confidentiality with the department head who said he would not listen to any discussion about the results and shared that at the beginning of the session.

Regardless, the fourth group member, Bob, was interrupted or disregarded frequently throughout the meeting. Another group member was very reticent and careful about what he said. The three members also sat across from Bob rather than sit

next to him. In addition, Bob several times alluded to a special relationship or knowledge of Kevin, the department head, to other group members.

### **Group developmental stages**

Because three of the members did not trust Bob, this significantly affected the progress of the group through developmental stages, in particular the group's ability to form. Most of the conversation in this group was focused on communication, planning, the need for business direction and structure. They rarely discussed interpersonal issues. Al, who had more seniority, and Tom, tended to participate more fully than Bill or Bob (who was often ignored).

There were some attempts to form, in which members clarified the task, approached safe subjects and looked for guidance from a group leader. The storming phases of the group were mainly dominated by Al and Tom, possibly indicating competition for leadership. There also were instances of deferment to Al. Storming also occurred early on when Bob participated, possibly because he would infer a special relationship or access to inside information with Kevin, the department head.

There was some evidence of norming among three of the four members, but rarely among the entire group. Although Al and Tom competed for leadership, Al appeared open to differing

viewpoints, was able to change his mind and would ask others' opinions early in the group meeting.

In what could be described as a norming stage, three, but not all four, of the group members agreed on several issues, such as the need for clear goals for ENVIRONMENTAL CONSULTING, but they did not frequently acknowledge each other's contributions or engage in community building and group maintenance behaviors often, which are behaviors indicative of the norming phase. In addition, sharing of personal feelings was rarely observed. Three of the four group members did acknowledge the contributions of the mid-level civil engineering manager, Mike, indicating loyalty toward management.

Performing (described as a high degree of interdependence, morale and loyalty) was not observed among all four group members, which is possibly attributed to the lack of trust of three of the members toward Bob, competition for group leadership between Al and Tom, and that this was a short-lived group. In addition, Al was the only member to ask others' opinions and would offer solutions and identify learner needs more often than the other group members. He also appeared to want the process of the focus group discussion to be successful and tried to help the facilitator.

Bill, the quiet engineer who appeared resistant and distrustful of the other group members, began to close the meeting and begin a mourning phase, but Al appeared to want to continue the process.

### **Conformity**

Conformity was also evident in this meeting. For example, Bob early on had an objection to holding too many meetings, citing his experience in the Navy in which he felt many were unproductive, and then later changed his opinion about holding meetings. After the first half an hour of the meeting, Bob's participation in the group discussion dropped off, and Bill's began to emerge late in the group meeting.

### **Pairing**

Overall, Tom and Al appeared to compete with one another and then agree on issues and were the most active participants in the process, although Bill did contribute more later in the meeting. Tom and Al would pair and then build on each other's ideas, even early during the meeting. Although they do pair, their relationship is also characterized by competition for group leadership (see section on Storming). It also appeared that three of the group members were very close and the fourth member, Bob, was disregarded and ignored.

**Degree of participation**

While Tom and Al participated frequently, Bill and Bob participated much less. Bob was distrusted frequently by the group, as shown earlier, therefore he was interrupted and ignored. It became apparent later in the meeting that Bill was resistant to the group meeting, did not trust the moderator and the other members to keep information confidential, which may be why he chose not to fully participate in the discussion.

During the last quarter of the group:

Bill: Are you repeating this? Don't repeat any of this about Larry (to Moderator and other group members).

Moderator: This tape isn't goMwg to Larry.

Later

Moderator: What else do you see as wasteful?

Bill: I keep this in mind.

**Expression of an Awareness of Need for Change**

The group developed an awareness of need to change the way the company was operating, but attributed most of the problems to other people and departments, such as the President, management and other departments. They did not express a need to change the way they were working and communicating.

### **Influence of individual issues on the group process**

Two of the members brought issues that they wished to be discussed at the meeting and would frequently draw the group back to discussing these issues. Tom most often dominated the group with stories of his personal experiences at the company.

Tom: Another problem they have is not just communication among the departments but with us and the branch office. They're like off in another world; I just came across a fiasco where we tried to put together a marketing package proposal and it's going to be for the County of Albemarle. The branch office should have have led the whole thing and they kind of made us lead and at the last minute wanted to review it and they're like, why don't you....it was a total fiasco and there was a huge communication problem there. And I know they're hot at us and there's going to be some fallout eventually and they're probably pulling it off right now...

One member, Tom, appeared to dominate the group discussion with personal issues he brought to the meeting, and would compete with the Al, another group member who appeared to want to problem solve.

## **Results of Group B: Laterally heterogeneous and vertically homogeneous**

### **Quality of idea generation**

While Group A was almost linear in its approach to group discussion, Group B demonstrated a more random and diverse exchange of ideas, even early during the group meeting. Members of this laterally heterogeneous but vertically homogeneous group represented laboratory services, administration, marketing, and field support services. They built upon each other's ideas by expressing differences of opinions. In response to the first question, three separate ideas were offered as possible problems that the company was facing.

Even early during the meeting, the following needs for change were generated: replacement of the current large contract, generating more clients and becoming less one client dependent, needing business direction, better cash flow and financial management, better use of physical resources, need for supervision and on-the-job training. In addition, this group began early to present the context of both its internal and external environment when discussing the economy. They also emphasized the need for learning on the job, which was one of the main purposes of the study.



Helen: We grew way too fast.

Jerry: Yea we grew way too fast, which is not uncommon in this business, especially in this company, it was one of the typical boom businesses in the 80s. The economy was taking off and this company went right with it.

This meeting was less moderator-directed in terms of identifying issues to be discussed than the homogeneous group of engineers. The moderator concentrated on clarification of responses and ensuring participation from all members.

**Table 2: Group B Identification of Needs**

Laterally heterogeneous and vertically homogeneous

Workplace Learning

- Staff need to understand "big picture"
- Need training in admin procedures for technical staff
- Need to train new hires
- Mgmt needs time to train
- Time and support for on-the-job training
- Need cross training except for marketing
- Need opportunities to meet specialists in field
- Marketing skills cannot be learned
- Computer training not needed
- Need to hire & train marketers
- Mgmt training in project mgmt & business skills
- Need broader learning experiences to develop beyond current job description

Table 2. Group B Continued

Morale

- Uncertain about security/future of company due to loss of LA Clarke contract
- Some work harder than others
- Some employees need supervision: "goofing off" affects morale of others
- Some staff need motivation & direction
- Some departments left out
- Poor morale fosters rumors
- Staff compete to get work/samples done
- Unfair salaries
- Staff, not mgmt, held responsible
- Staff anticipate cutbacks
- Some took advantage of privileges of company
- Job titles do not match reality
- Some staff do not have control over their schedules
- Staff believe mgmt do not want to lay off people
- Employees are beginning to look for other jobs
- Professionals are doing admin work
- Non-technical employees feel less important
- Cutbacks to lab and admin unfair
- Sexism and chauvinism
- Need to provide opportunities to advance and broaden experiences for staff
- Some employees don't care about environmental mission
- Minority feel employees work against each other
- Mgmt protected
- Staff feel expendable
- Cutbacks in benefits
- Need motivation to improve/opposing opinion feel employees need to motivate selves
- Willingness to carry former marketers while others worked hard was demoralizing
- Mgmt believes staff should not be concerned with the business

Table 2. Group B Continued

Business Planning

- Need to replace LA Clarke with another large contract
- Need to hire biz admin mgr
- Missed deadlines due to lack of planning
- Too many short notices
- Mgmt needs to communicate future strategy to staff
- Need better short-term planning intra- and inter-departmentally
- Need better long-term planning
- Departments compete for scheduling in lab
- Staff understand that it is difficult to plan and be responsive to client needs
- Become less one client dependent
- Need for long-term financial goals
- Need to build cash reserves

Resources/Support

- History of extravagant spending
- Unnecessary field, computer and office equipment
- Unfair salary raises to a few
- Mgmt lack biz skills
- Mgmt not attune to costs
- High billable rates: Too many management
- R&D benefits individual, not company
- R&D not profitable
- Some have abused privileges
- Misuse of mobile phone
- Wasteful to have technical staff doing admin work
- Need to hire secretary for admin support

Marketing

- Former marketers seen as incompetent
- Like engineering marketer
- Need to hire marketer who understands environmental business
- Engineering marketer needs to learn about whole company
- Against training staff for marketing (needs special personality)

Table 2. Group B Continued

Communication

- Closed door meetings foster rumors
- Need better inter/intradepartmental communication
- Headquarters & satellite offices need to meet more often
- Some departments excluded from meetings and projects they work on
- Different directives from different managers: need to agree on an approach
- Need management to meet with each other and staff more often
- Closed door meetings foster rumors
- Mgmt needs to be proactive in stopping rumors
- Staff depend on rumors for information
- Need to communicate future plans for company
- Mgmt needs to be more explicit
- Not getting written information to staff (particularly field)
- Need to communicate with lab & field better for scheduling
- Need to understand what other departments do
- Some don't make effort to communicate
- Don't work together to solve problems
- Some departments excluded from newsletter
- Expectations implied, not explicit from mgmt
- Need more teamwork
- Some don't want to contribute to newsletter
- Better communication about upcoming proposals

Table 2. Group B Continued

Management Approach

- Need to delegate more
- Some hide from problems
- Not proactive in meeting deadlines & dealing with rumors, conflict and problems
- Procrastinated too long in laying off former marketers
- Conflicting directives from different managers: need to agree on approach
- Need to supervise employees who are not busy
- Some not working hard enough
- Some overworked
- Too many managers
- Need to meet with each other and staff more often
- Need to tell staff truth about company
- Not attune to costs
- Mgmt not held accountable
- Some managers are overworked
- Are approachable
- Willing to answer questions & help
- Most care about employees
- Unclear about what is expected
- "Dangle carrot sticks" (promises don't intend to keep)
- Don't trust managers to keep information confidential
- Managers are highly competent
- Need to give more frequent feedback, especially to new hires
- Do not believe staff need to understand business
- Different managers reward different accomplishments

Table 2. Group B Continued

<p><u>Processes/Procedures</u></p> <ul style="list-style-type: none"> <li>- Need to pre-plan</li> <li>- Chain of command unclear</li> <li>- Need more structured processes</li> <li>- Procedures in place not followed (particularly in field &amp; lab)</li> <li>- Priority given to mgmt projects</li> <li>- Need for team work for scheduling</li> <li>- Need more feedback from mgmt and structured review</li> <li>- Need fair, clear review process</li> <li>- Some departments well organized, others not</li> <li>- Lab &amp; field schedules not followed</li> <li>- Mgmt structure cumbersome</li> <li>- Different procedures for different managers</li> <li>- Need templates for written work (proposals, reports)</li> </ul>
<p><u>External context</u></p> <ul style="list-style-type: none"> <li>- Loss of major client biggest problem</li> <li>- Company grew too quick in response to 1980s growth in industry</li> <li>- Uncertain economic conditions</li> <li>- Increasingly complex regulations</li> </ul>
<p><u>Advantages</u></p> <ul style="list-style-type: none"> <li>- Open supervision</li> <li>- Mgmt highly competent in fields</li> <li>- Engineering marketer seen as a positive force industry</li> <li>- Harmonious work environment (minority disagreed)</li> <li>- Diversity of services to match client needs</li> <li>- In-house lab</li> <li>- Well publicized</li> <li>- Mgmt accessible</li> <li>- Good benefits</li> <li>- Multidisciplinary concept/philosophy that focuses on industry</li> <li>- Like the leader</li> <li>- "One of the best places I've ever worked"</li> <li>- Most mgmt willing to help staff</li> <li>- Highly client responsive</li> <li>- In-house newsletter</li> </ul>

As the table indicates, this group emphasized interpersonal issues as important to the organization: morale, communication and management approach. In addition, this group gave the richest context of the organization's history and attitudes.

### **Trust and Openness**

Group B discussed interpersonal issues and shared personal feelings about their work in this organization. One of the group members, however, participated very little during the group meeting, although she did begin participating more late in the meeting. By nature, though, she was a highly introverted person and also she had just given notice that she was leaving the company. This might also have influenced her commitment to the group process.

Overall, the group members appeared to trust each other enough to reveal personal feelings to one another. A possible reason for their high degree of trust may have been that they were the third group interviewed and trusted the moderator and other group members not to reveal confidences. They shared, in the last third of the meeting, that former group members did not reveal their group meeting discussions with others in the company, which probably enhanced their trust of the group



process. This later led to a discussion on how the results were going to be used, which is discussed in the section on mourning.

### **Group Developmental Stages**

This group appeared to form, storm and norm earlier than Group A, which was laterally and vertically homogeneous. Consequently, solutions to problems the company was facing appeared to be both more abundant and diverse. This cycle of form, storm, norm and perform occurred frequently throughout the group meeting.

The group members did not spend time clarifying the task or asking about the purpose of the meeting. They appeared less dependent on the moderator for information or to clarify the task than Group A. In addition, the members did not defer to any one member to answer for them, as they did in Group A. However, it is also important to add that they were the third group interviewed during the study, so that they may have been better prepared than the first two groups interviewed, although there was at least one occasion on which clarification was an issue.

As the meeting progressed, members freely offered names. They were mostly concerned with how the data was going to be presented, which they discussed during the mourning phase at the end of the meeting. Storming phases during this group

discussion tended to be less frequent but lasted longer and involved at least three of the group members, while in Group A they tended to involve just two of the members in a competition for leadership. Two of the group members competed for leadership early in the meeting and tended to participate the most (Helen and Jerry). Mark, the chemist, was actively involved while the marketing assistant remained quiet during most of the meeting and did not contribute much to the discussion until nearly the end of the meeting.

Jerry attributed the problems in the field with the lack of discipline in the company, while Helen attributed the problems to poor morale and appeared to identify with the field workers. Storming also involved different people throughout the discussion. In the other groups, participants would tend to disagree with the same group member on several occasions.

There were many instances of cohesiveness and full participation from all members, marking the norming stage. Members were observed sharing personal feelings, theories about the company and empathizing with one another.

After indicating that he was impatient with the discussion of Lois and Helen's frustration at being perceived as secretaries rather than professionals, Mark indicated he was sympathetic to their position. He began to express appreciation for Helen's skills and acknowledged her

contributions to the company.

In the most dramatic example of exposing personal feelings, Jerry and Helen discussed interpersonal dynamics between each other. As they discuss these issues, the other group members also participated.

Jerry: Well while we're problem solving here, we clash.

Helen: Who you and me?

Jerry: Right.

Helen: Well we're both very strong personalities.

Jerry: Because you know, we've clashed, but we have had clashes.

Helen: I've clashed with almost everyone in this company.

Group laughter.

Jerry: But that's the last thing I want to do, clash with anyone.

Helen: Well don't take it personally, you're not alone, I clash with Lois and Mike I'm sure.

Solutions to problems were offered by most of the members in the first quarter of the meeting, without one dominating as was the case with Group A. In addition, this group was able to identify positive attributes about the company when asked "What are ENVIRONMENTAL CONSULTING's competitive advantages?", although they did quickly move back into a problem identification mode of discussion.

Another example of performing was during a discussion of marketing needs in the company. Each member contributed to the

discussion about what was needed to fill this void. Toward the end of the meeting, possible alternative strategies to deal with poor communication in the company were offered.

Members of this group appeared to experience a longer mourning phase than Group A. During the last third of the meeting, members shared that they trusted the process because previous group members had not revealed what was discussed (see trust and openness). Following this, they began asking questions about how the results were going to be used, which indicated that the members themselves were beginning the termination phase. While one member expressed concerns about identifying people, another was not concerned about identifying herself in the results.

While the members indicated that they wanted to close the meeting, they then began solving other problems and identifying needs in the company for change. This group both began the process of mourning themselves and asked more questions about how the report was going to be presented than any of the other groups.

In addition, this group stayed after the meeting to talk with one another and the moderator, whereas the homogeneous group left abruptly once the meeting was over.

### **Conformity**

There were few instances of conformity. For example, Helen felt that the field workers were suffering from poor morale, therefore it was understandable that they were under-motivated and not working hard. All three of the other group members disagreed, but Helen never conformed to their opinion, although she did indicate that she understood their position.

### **Pairing**

Although pairing occurred, it appeared to shift. Helen appeared to compete for leadership with both of the male members. In the beginning, the two men paired and the two women appeared to pair on certain issues. Helen and Jerry appeared to pair toward the end of the meeting.

Early during the meeting, Mark and Jerry paired and Helen and Lois paired when discussing the loss of secretarial support in the company, with Mark apparently annoyed, and then Helen and Jerry paired after an initial difference of opinion. Mark and Helen paired when discussing cutbacks in salaries during the Christmas holiday. There appeared to be a relationship of pairing with norming, leading to performing. Once members paired, they might have felt freer to discuss personal issues.

**Degree of participation**

This group had the greatest number of group members participating and for the longest duration of all the focus groups interviewed. There were many examples of all four members participating. In addition, there also were more three-member conversations observed than the other groups. Helen and Jerry participated the most, with Lois participating the least. Regardless, there were several instances of four-person conversations and each member discussed something of importance to them during the meeting. It is possible that this high degree of participation is due to the changing nature of pairing in the group.

**Awareness of need for change**

This group identified many areas where change was needed, such as clear procedures, reducing billable rates, and marketing training (see Table 2. Group B Identification of Needs). These needs appeared to encompass a wider variety of areas than in Group A, and did not focus just on management. For example, one need identified was that some employees needed to be better supervised and were not working hard enough, possibly because of poor morale.

**Influence of individual issues**

All of the four members appeared to have important issues that they wished brought to the meeting and would repeat these during the meeting. Helen felt morale, particularly among field workers, sexism and the need for administrative support were important issues and would continue to bring it up throughout the meeting. Mark was mostly concerned with technical staff having to take over secretarial duties. Jerry wanted to discuss the lack of field worker motivation and supervision while Lois appeared most interested in discussing the need for more secretarial support. While the group members did bring in their departmental issues or agendas, they also seemed willing to discuss others' ideas and issues.

**Results of Group C: Laterally homogeneous (chemists) and  
vertically heterogeneous**

**Quality of Idea Generation**

This group of both management and non-management employees emphasized planning, and appeared to avoid interpersonal issues, although poor morale and communication were discussed. Management present appeared to contribute most in discussion of planning and marketing in the company, which are considered primary responsibilities of management. Management present influenced the quality of ideas generated by focusing discussion on those areas, interrupting or talking over the staff-level employees and dominating the conversation. Staff-level employees were remain silent when there was a conflict and not present differing opinions.



Table 3: Group C Identification of Needs

Laterally homogeneous and vertically heterogeneous
<u>Workplace Learning</u> <ul style="list-style-type: none"> <li>- Need to train receptionist</li> <li>- Need for cross training</li> <li>- Need new hire training</li> <li>- Mgmt opinion: "seat of the pants" approach is best</li> <li>- Need training in lab</li> <li>- Many learning opportunities (employees "not pigeon holed")</li> <li>- Need organizational skills</li> <li>- Training in mgmt skills and financial planning</li> </ul>
<u>Morale</u> <ul style="list-style-type: none"> <li>- Poor job security</li> <li>- Need for morale building activities</li> <li>- Company keeps people who are unproductive</li> <li>- In the past, hired people with poor interpersonal fit</li> <li>- Technical people have to do admin work is demoralizing</li> <li>- Unfair salaries</li> <li>- People not promoted because of current circumstances</li> </ul>
<u>Business Planning</u> <ul style="list-style-type: none"> <li>- Tendency to procrastinate</li> <li>- Need to replace LA Clarke</li> <li>- Too 1 client dependent</li> <li>- Need to diversify</li> <li>- Need to plan marketing calls</li> <li>- Need more long-term planning</li> <li>- the branch office plans better</li> <li>- Schedules not followed</li> <li>- Need planning meetings</li> <li>- Lab needs better advance notice</li> <li>- Less interesting projects tend to be shoved aside</li> <li>- Too many #1 priorities in lab</li> <li>- Lab goals are clear</li> <li>- No continuity between projects for staff (feel jerked around)</li> </ul>

Table 3 Group C Continued

Resources/Support

- Extravagant spending
- Mgmt feel employees paid well; non-mgmt believe staff level not paid well
- Need more & better qualified support staff

Marketing

- Marketing approach too focused
- Opposing opinion: approach needs focus (everyone doing anything they want)
- Need marketers with technical background
- Need to have marketing meetings
- Need marketing strategy
- Need time commitment for marketing
- Mgmt. send incompetent personnel to market

Management Approach

- No follow through
- Some helpful and others not
- Mgmt has big picture and won't share it with employees
- Employees reluctant to seek help
- Need more frequent feedback
- No quality/review process in place
- Mgmt carries people
- Need to be better organized
- Don't face personnel problems

Table 3 Group C Continued

Communication

- Mgmt don't inform staff about projects
- Newsletter is helpful
- Need protocol for assigning projects to correct person
- Calls not getting to the right person
- Need to know who is doing what
- Need to train receptionist
- Need more meetings
- Need too understand other departments' capabilities
- Need to discuss proposals
- "Ball gets dropped"
- Missed deadlines a problem

Structure and Procedures

- Some fragmentation necessary for groups to be self-supporting
- Company is open and fluid
- People not confined to specialty
- Procedures/templates available
- Staff may not be aware of existing procedures
- Disorganized image

Internal & External Context

- Need to replace LA Clarke with new business
- History of extravagant spending
- Small company mentality
- Big projects brought to company by outside attorney
- As company grew, mgmt could not let go of little things

Table 3 Group C Continued

Advantages

- Diversity brings choices to client
- Commitment to client
- Highly responsive
- Quick turnaround
- Not involved with federal govt bureaucracy
- R&D devoted too reducing client costs
- Lab is a competitive plus
- Lab competitively priced
- Open supervision
- Enough time to do work (minority opinion)
- Flexible

### **Trust and Openness**

Following the group meeting, one of the women (both of whom were staff level) told the moderator that she felt uncomfortable talking with one of the managers present and that it would have been a better meeting if he had not been present. The two women appeared to pair, which will be discussed further later in this section, and were dominated in discussion by the two male managers present. In addition, issues that were mostly discussed were management concerns about marketing, planning and the company's future goals. Morale, communication, management approach and other interpersonal issues were not discussed in as great depth as they were in Groups A and B.

### **Group Developmental Stages**

Forming was evident early in the meeting shortly after the moderator introduced the purpose of the meeting, when one of the group members wanted to clarify the task.

Shortly after clarification of the task, Tim and Beth appeared to compete, with Tim strongly disagreeing with her statement.

Tim and John dominated the discussion from its beginning, from discussing replacement of the current large

contract with another to discussing marketing needs, which was John's current area of interest. There was some evidence of Beth trying to become actively involved in the meeting but being dominated by either John or Tim. John dominated discussion early during the meeting with discussion of marketing and Tim with laboratory and business planning. In addition, John and Tim would correct and talk over the women in the group.

Following is an example where both the non-management women group discussants were interrupted and talked over during the discussion.

Beth: The branch office might as well be another company, because they don't know anything that we're doing and we don't know anything about what they're doing

Jane: They tried to do that (is interrupted)

Tim: Well actually that depends on what part of the company that you can work on here because the branch office brings in a lot of work for the lab.

Beth: Well maybe the department heads know that they're doing (talked over).

Tim: And so I have some feelings for what they're doing just because we interact with them. You probably interact with them only once in a while (to John). They're bringing samples in.

One of the female group members felt that on the job training for new hires was poor, and that structured processes were needed. The other three members all disagreed, stating that they believed that seat of the pants training is the best

way to learn on the job. Three of the group members disagreed with one another in discussing employees being included in the total concepts of projects, with Beth and Jane pairing against John.

There were moments when three of the participants were more likely to try to agree with one another, but rarely all four. Agreement among three of four participants was observed when discussing missed deadlines in the company. Tim remained silent during the discussion of missed deadlines.

This group meeting was characterized by short intervals of competition for leadership, pairing and then long periods of silence, with one or two members dominating discussion. Rarely were all four group members actively engaged in problem solving or sharing diverse viewpoints, although they all had thoughts to share about the advantages of working at ENVIRONMENTAL CONSULTING.

As the group began to wind down, after the moderator announced she was asking the final set of questions, the group began to reach agreement on the importance of morale building activities.

### **Conformity**

After the meeting, one of the female, staff-level employees confided to the moderator that she would have been more comfortable if one of the male mid-level managers had not

been present during the meeting. Each time one of the managers corrected or expressed a difference of opinion, the two women participants would not talk. An example follows.

Tim: Well the most obvious one is that a large project is coming to an end and there is a lack of following business to take its place.

Beth: Which translates into less job security.

Tim: Well it translates into if you're going to keep your job we've got to work hard to find business is what it translates into. You can translate it into whatever you want to translate it into. That's your translation.

Moderator: Which is fine.

Tim: Yea.

Beth did not expand or comment further about job insecurity in the company. The other staff-level woman spoke rarely during the first half of the meeting but did begin participating more later. It is interesting to note that the only management issues were those problems attributed to upper management, not mid-management.

### **Pairing**

There were many dramatic examples of pairing in this group discussion. Pairing occurred usually along both gender and vertical dimensions. The two women were non-management staff level employees and the two men were mid-level managers.

Because pairing was so pronounced across both the gender and management dimensions, it is possible that conformity was



intensified because members would not disagree with people with whom they felt close.

Jane frequently spoke to expand on what Beth said. In addition, there were a few instances of pairing that crossed these lines, usually after a short difference of opinion.

#### **Degree of participation**

In this group, pairing and competition for leadership affected the degree of participation from all members. One of the managers dominated discussion early in the meeting, as if he had his one issue he wished to discuss and then did not participate much after that. The other male manager and one of the women participants appeared to compete for leadership and would conflict. The second woman participant did not participate much at all the first half but then participated more in the second half of the meeting. Rarely did all four participants discuss a topic or problem solve.

#### **Expression of an awareness of need for change**

There were expressions of wants such as bringing in more business, but not many expressions of needing to change the way the company was operating.

Some that were mentioned include: diversification, to communicate more, better organization. Rarely did the members

admit to needing to change the way they were working; most of the problems were attributed to upper management style or the economy. Regardless of attribution, this meeting did appear to heighten an awareness of need for change among participants. One of the male participants signed his name to his feedback sheet, which follows:

What did you like most about the meeting? People that do not say anything at other meetings had a chance to express their opinion.

What did you like least about the meeting?

I think that the problems should not be addressed on a broad base (as a whole company) but pointing out specific persons and problems and solutions. We have been addressing "direction," business plans," etc., but nothing happens if tasks and plans do not have a specific person in charge.

His response to the group meeting strongly indicated a desire to change the way the company was operating by "solving problems" instead of just analyzing them.

#### **Influence of individual issues on the group process**

The two managers appeared to have issues that they wished to discuss and appeared to dominate the group meeting with these issues. John wished to discuss the incompetence of the previous marketers and how that was handled by upper management and marketing strategy. Tim also was concerned

about marketing, and also wanted to discuss interdepartmental communication and planning, and spent a great deal of time discussing laboratory operations.

The demoralizing effect that the two previous marketers had on the rest of the company was discussed in all four groups and the other members of the group also seemed very willing to discuss this issue.

Because management tended to dominate in this group discussion, I believe issues that involved mid-level management approach were avoided as well as discussions that revealed personal feelings about themselves and others.

**Results of Group D: Laterally and vertically heterogeneous****Quality of ideas generated**

As you can see from Table 4, this group produced both fewer and less diverse ideas than the other groups, probably because it had more of a mid-level management perspective. Management Approach issues discussed were mainly attributed to upper management, although needing to delegate and train more were seen by one of the managers as something she needed to improve. This group also spent much less time identifying positive attributes of the company and on providing a context of the organization. Ideas were both fewer in number and in diversity or quality.

**Table 4: Group D Identification of Needs**

Laterally and vertically heterogeneous
<u>Workplace Learning</u> <ul style="list-style-type: none"> <li>- Many learning opportunities</li> <li>- No resources for professional development</li> <li>- Need to decrease mgmt training burden by hiring experienced employees</li> <li>- Training increases hours billed</li> <li>- Current learning on the job ("seat of the pants") approach is best</li> <li>- Need to train on marketing</li> <li>- Need to train in time mgmt</li> <li>- Managers need to teach writing skills to employees</li> </ul>
<u>Morale</u> <ul style="list-style-type: none"> <li>- Everyone gets along</li> <li>- Some people don't work hard enough (except in field)</li> <li>- Some tend to blow problems out of proportion</li> </ul>
<u>Business Planning</u> <ul style="list-style-type: none"> <li>- Need more long-term planning</li> <li>- Some people procrastinate</li> <li>- Need to inform lab of upcoming projects</li> <li>- Missed deadlines are NOT a problem</li> </ul>
<u>Resources/Support</u> <ul style="list-style-type: none"> <li>- Rates exceed budgets</li> <li>- Need more new business</li> </ul>
<u>Marketing</u> <ul style="list-style-type: none"> <li>- Need clear strategy</li> <li>- Minority: Different projects coming so outlook is good</li> <li>- Majority: Need more new biz</li> <li>- Skeptical about South American marketing project</li> </ul>

Table 4. Group D Continued

<p><u>Management Approach</u></p> <ul style="list-style-type: none"> <li>- Need to delegate more</li> <li>- Need to provide more frequent feedback</li> <li>- Conflicting directives</li> <li>- Chain of command unclear</li> <li>- the branch office mgmt make decisions affecting headquarters</li> <li>- Field needs clearer direction</li> <li>- Field needs to see managers more often</li> <li>- Mgmt doing more work increases costs</li> <li>- Don't face personnel problems</li> </ul>
<p><u>Communication</u></p> <ul style="list-style-type: none"> <li>- Mgmt needs to be more explicit</li> <li>- Need more meetings</li> <li>- "Ball gets dropped"</li> <li>- Employees don't need to know what other departments doing</li> <li>- Lab needs better advance notice</li> <li>- Conflicting directives</li> </ul>
<p><u>Structure and Procedures</u></p> <ul style="list-style-type: none"> <li>- Chain of command unclear</li> <li>- Lab processes not followed</li> <li>- Conflicting directives</li> <li>- Procedures/templates are available</li> <li>- Organization top heavy</li> <li>- Loss of staff level expertise affects quality</li> <li>- Company is well integrated</li> <li>- Need to hire more mid-level staff</li> </ul>
<p><u>Internal &amp; External Context</u></p> <ul style="list-style-type: none"> <li>- Need to replace LA Clarke with more business</li> <li>- History of extravagant spending</li> </ul>

Table 4. Group D Continued

**Advantages**

- Flexible work environment
- Client oriented
- Honest with client
- Diversity
- Quick responsiveness
- In-house expertise
- Competitive rates
- High quality field workers

**Trust and Openness**

This meeting was characterized by dominance from management, who tried to get non-management employees to participate, and long pauses in which no one would participate.

There were so many long pauses, and instances where members would not respond to questions, that at the end of the meeting, the moderator again tries to make sure everyone feels comfortable.

Moderator: Anything else on helpful and unhelpful? (No response). Does everyone feel comfortable here talking?

Audrey: Uh huh (agreement).

In addition, this group seemed less curious about how the results were going to be used and more about the research aspect of the study. The other three groups asked questions about how the information was going to be presented and used,

but this group appeared uninterested and also were more curious about why their meeting did not last as long as the others.

### **Group Developmental Stages**

Management personnel asked for clarification of questions throughout this group meeting, so that the group appeared to try to form more than once. There were few instances of disagreement and little competition for leadership. Mike emerged early as the group leader, with Karen supporting his statements or deferring to him. Kyle and Tchimy rarely talked, let alone disagreed with anyone in the meeting. Management would sometimes attempt to clarify what a non-management employee was stating.

The two managers would try to give support to the two non-management employees and recognize their importance to the company. Both attempted to assist the facilitator in drawing out less expressive participants.

In a couple of instances, three of the group members would appear to norm, but they did not share personal feelings about their work. Management present recognized the contributions and achievements of other employees who were not present.

While the two managers would recognize the importance of the two non-management staff employees present, they also



would "speak for" management in the company. Because two of the group's members did not fully participate, the performing stage was not observed. There were no instances of discussion of a topic from all four members, unless the moderator expressly called on each member in a round robin format.

Similarly, the participants did not begin a mourning phase as they did in Group A and particularly in Group B. The moderator finally terminated the session after she exhausted all lines of questions. The members asked questions about the research aspect of the focus group study at the end of the meeting.

It is also interesting to note that this group was less concerned than the other groups about how the information was going to be presented to Larry and what was going to be done with the findings. They were more interested in group design and why the meeting lasted less time than others.

### **Conformity**

Because two of the group members rarely participated, we can speculate that they did not openly express any disagreement about issues the two managers were discussing. The moderator would frequently call on the two staff level employees for their opinion and often get no response.

**Pairing**

The two managers paired early on and continuously throughout the meeting, deferring and agreeing with one another. The two non-management staff level employees did not appear to pair with one another. Karen would defer to Mike to answer for management. There was also an instance of pairing among the two of the men across management lines.

**Degree of participation**

The lack of participation from two of the group members dramatically affect the interpersonal dynamics and quality of ideas generated during the focus group meeting. Rarely did more than two people discuss an issue during this meeting.

This lack of participation may be attributed to distrust of the process or moderator, or failure to find common themes between management and non-management; however, it is important to note here that management present did try to involve staff level employees in the discussion and by their nature were not overly domineering people. In addition, the moderator frequently tried to involve all the group members, even using a round robin style of interviewing that was unnecessary in the other group meetings.

**Awareness of Need for Change**

One of the managers expressed an awareness of need for change in delegating tasks more often and in providing feedback to enhance the learning curve of employees in writing reports. Most of the management problems were attributed to upper management, however, not mid-level management. It is interesting to note that the first problem mentioned and one that was later referred to frequently was chain of command not being followed or unclear. Upper management was seen as skipping the chain of command or making decisions without involving departmental managers. The managers also expressed a need to learn more about marketing in order to be more successful at it. Overall, though, the other group members appeared to not express a need for change in the way the company and themselves were operating.

**Influence of individual issues**

The managers appeared to wish to discuss the issue of chain of command not being followed. In addition to that, the field worker also wanted to find out information about the company's future strategy.

Overall, this group shied away from interpersonal issues or expression of feelings about their work and people with whom they worked.

A discussion of all four groups follows.

## Discussion

### Research question 1

The results to research question 1 did not support the current assumption in the literature, which proposes focus groups be composed of members who are laterally homogeneous. Because vertical heterogeneity (research question 2) appeared to interfere with the quality of group discussions, lateral heterogeneity could only be observed in group B, which was laterally heterogeneous and vertically homogeneous. This group included staff level employees from business administration, marketing, field operations and laboratory services.

The results in this study of this type of organization indicated that when members were vertically the same, the lateral differences enhanced group discussion, but lateral diversity in combination with vertical differences produced the lowest quality group discussion.

Results will be discussed according to analysis of the following:

- \* Quality of ideas generated
- \* Trust
- \* Group developmental stages
- \* Conformity
- \* Pairing
- \* Participation

- \* Development of an awareness of need for change
- \* Influence of individual issues.

### **Quality of ideas**

The following tables illustrate the greater diversity of ideas produced by the laterally heterogeneous group by comparing the results of data gathered from Group A: laterally and vertically homogeneous (engineers) to Group B: laterally heterogeneous and vertically homogeneous. Table 5 will first illustrate similarities of ideas between the two groups and Table 6 contrasts the differences between the two groups.

**Table 5. Similarities between Groups A and B  
Vertically homogeneous**

Workplace Learning

- Staff need to understand "big picture"
- Need training in admin procedures for technical staff
- Need to train new hires
- Management needs time to train

Morale

- Uncertain about security/future of company due to loss of LA Clarke contract
- Some work harder than others
- Some employees need supervision: "goofing off" affects morale of others
- Some staff need motivation & direction
- Some departments left out
- Poor morale fosters rumors
- Staff compete to get work/samples done
- Unfair salaries
- Staff, not management, held responsible
- Staff anticipate cutbacks

Business Planning

- Need to replace LA Clarke with another large contract
- Need to hire biz admin mgr
- Missed deadlines due to lack of planning
- Too many short notices
- Management needs to communicate future strategy to staff
- Need better short-term planning intra- and inter-departmentally
- Need better long-term planning

Table 5. Similarities Continued

Resources/Support

- History of extravagant spending
- Unnecessary field, computer and office equipment
- Unfair salary raises to a few
- Management lack biz skills
- Management not attune to costs
- High billable rates: Too many management

Marketing

- Former marketers seen as incompetent
- Like engineering marketer

Management Approach

- Need to delegate more
- Some hide from problems
- Not proactive in meeting deadlines & dealing with rumors, conflict and problems
- Procrastinated too long in laying off former marketers
- Conflicting directives from different managers: need to agree on approach
- Need to supervise employees who are not busy
- Some not working hard enough
- Some overworked
- Too many managers
- Need to meet with each other and staff more often
- Need to tells staff truth about company
- Not attune to costs
- Management not held accountable

Table 5. Similarities Continued

Communication

- Closed door meetings foster rumors
- Need better interdepartmental/intradepartmental comm
- Headquarters & satellite offices need to meet more often
- Some departments excluded from meetings and projects they work on
- Different directives from different managers: need to agree on an approach
- Need management to meet with each other and staff more often
- Closed door meetings foster rumors
- Management needs to be proactive in stopping rumors
- Staff depend on rumors for information
- Need to communicate future plans for company
- Management needs to be more explicit

Structure and Procedures

- Need to pre-plan
- Chain of command unclear
- Need more structured processes

Internal and external context

- Loss of major client biggest problem
- Company grew too quick in response to 1980s growth in

Advantages

- Open supervision
- Management highly competent in fields
- Engineering marketer seen as a positive force industry



**Table 6. Differences between Groups A and B**

Group B: Laterally Heterogeneous	Group A: Laterally Homogeneous
<p><u>Workplace Learning</u></p> <ul style="list-style-type: none"> <li>- Need time and support for on-the-job training</li> <li>- Need cross training except for marketing</li> <li>- Need opportunities to meet specialists in field</li> <li>- Marketing skills can not be learned</li> <li>- Computer training not needed</li> <li>- Need to hire &amp; train marketers</li> <li>- Training in team work</li> <li>- Most liked learning on own</li> <li>- Management training in project management &amp; biz skills</li> <li>- Need broader learning experiences to develop beyond job description</li> </ul>	<p><u>Workplace Learning</u></p> <ul style="list-style-type: none"> <li>- No building of knowledge due to emphasis on new projects</li> <li>- Hire outside specialists for training in specialized areas</li> <li>- Need to provide transitional training when projects passed from 1 group to another</li> <li>- Need to train staff on marketing &amp; marketing strategy</li> <li>- Need for in-house seminars</li> <li>- Need for mentoring system for new hires</li> <li>- Current learning by mistakes increases frustration</li> <li>- Need to train staff on state regulations and forms</li> <li>- Need to train staff on computers</li> <li>- Need communication training</li> </ul>

Table 6. Differences Continued

<u>Morale</u>	<u>Morale</u>
<ul style="list-style-type: none"> <li>- Some "took advantage" of privileges of company</li> <li>- Job titles do not match reality</li> <li>- Some staff do not have control over their schedules</li> <li>- Staff believe management do not want to lay off people</li> <li>- Employees are beginning to look for other jobs</li> <li>- Professionals doing admin work</li> <li>-Non-technical employees feel less important</li> <li>-Cutbacks to lab and admin unfair</li> <li>- Sexism and chauvinism</li> <li>- Need to provide more opportunities to advance &amp; broaden experience</li> <li>- Some employees don't care about environmental mission</li> <li>- Minority feel employees work against each other (majority feel they work well with each other)</li> <li>- Mgmt protected</li> <li>- Staff feel expendable</li> <li>- Cutbacks in benefits</li> <li>- Need motivation to improve/opposing opinion feel employees need to motivate selves</li> <li>- Willingness to carry former marketers while others worked hard was demoralizing</li> <li>- Mgmt believes staff should not be concerned</li> </ul>	<ul style="list-style-type: none"> <li>- Some depts are not held accountable for making a profit</li> <li>- Need to increase morale-boosting activities</li> <li>- Company not serious about engineering</li> <li>- Engineers have to "bail out" other depts</li> <li>- Chem engineers more important than civil engineers</li> </ul>

Table 6. Differences Continued

<p><u>Business Planning</u></p> <ul style="list-style-type: none"> <li>- Depts compete for scheduling in lab</li> <li>- Staff understand that it is difficult to plan and be responsive to client needs</li> <li>- Become less one client dependent</li> <li>- Need long-term financial goals</li> <li>- Need to build cash reserves</li> </ul>	<p><u>Business Planning</u></p> <ul style="list-style-type: none"> <li>- Need to reassess goals of lab, equipment</li> <li>- Need integrated biz goals &amp; objectives that includes engineering</li> </ul>
<p><u>Resources/Support</u></p> <ul style="list-style-type: none"> <li>- R&amp;D benefits individual, not company</li> <li>- R&amp;D not profitable</li> <li>- Some have abused privileges</li> <li>- Misuse of mobile phone</li> <li>- Wasteful to have technical staff doing admin work</li> <li>- Need to hire secretary for admin support</li> </ul>	<p><u>Resources/Support</u></p> <ul style="list-style-type: none"> <li>- Purpose of R&amp;D unclear</li> <li>- Need admin person to track resource allocation</li> <li>- Need computer networking</li> <li>- Unfair equipment allocation</li> <li>- Depts compete for resources</li> <li>- Wasteful to have technical staff doing field work</li> <li>- Lab seen as unprofitable</li> <li>- Need to invest in lab for it be competitive</li> <li>- Need to price new projects along a learning curve</li> <li>- Innovative ideas need financial support</li> <li>- Computer marketing system not used</li> <li>- Need to save overhead costs</li> <li>- Staff need access to in-house specialized computers currently not used</li> </ul>

Table 6. Differences Continued

<u>Communication</u>	<u>Communication</u>
<ul style="list-style-type: none"> <li>- Not getting written info to staff (particularly field)</li> <li>- Need to communicate with lab &amp; field better for scheduling</li> <li>- Need to understand what other depts do</li> <li>- Some don't make effort to communicate</li> <li>- Don't work together to solve problems</li> <li>- Some depts excluded from newsletter</li> <li>- Expectations implied, not explicit from mgmt</li> <li>- Need more teamwork</li> <li>- Some don't want to contribute to newsletter</li> <li>- Better communication about upcoming proposals</li> </ul>	<ul style="list-style-type: none"> <li>- Need written meeting minutes</li> <li>- Need to follow up meetings</li> <li>- Need to understand Charlottesville's capabilities</li> <li>- Need to eliminate "double marketing"</li> <li>- Need to communicate long-term plans</li> <li>- Need to communicate company focus</li> <li>- Don't know who does what</li> <li>- Some meetings are a waste</li> </ul>

Table 6. Differences Continued

<u>Processes/Procedures</u>	<u>Processes/Procedures</u>
<ul style="list-style-type: none"> <li>- Procedures in place not followed (field &amp; lab, particularly)</li> <li>- Priority given to mgmt projects</li> <li>- Need for team work for scheduling</li> <li>- Need more feedback from mgmt and structured review</li> <li>- Need fair, clear review process</li> <li>- Some depts well organized, others not</li> <li>- Lab &amp; field schedules not followed</li> <li>- Mgmt structure cumbersome</li> <li>- Different procedures for different managers</li> <li>- Different managers reward different accomplishments</li> <li>- Need template for written work (proposals, reports)</li> </ul>	<ul style="list-style-type: none"> <li>- Engineers follow procedures, others don't</li> <li>- No follow through</li> <li>- Unclear who is project mgr</li> <li>- Need more structured processes for new hires</li> <li>- Engineers called in at last minute</li> <li>- Need better project mgmt</li> <li>- Need to develop marketing schedule and process to eliminate double marketing</li> <li>- Lab needs better planning</li> <li>- Lab billing system unclear</li> </ul>

Table 6. Differences Continued

<p><u>Management</u></p> <ul style="list-style-type: none"> <li>- Some managers are overworked</li> <li>- Are approachable</li> <li>- Willing to answer questions/help</li> <li>- Most seen as caring about employees</li> <li>- Unclear about what is expected</li> <li>- "Dangle carrot sticks" (promises don't intend to fulfill)</li> <li>- Don't trust managers to keep info confidential</li> <li>- Managers are highly competent</li> <li>- Need to give more frequent feedback, especially to new hires</li> <li>- Do not believe staff need to understand business</li> </ul>	<p><u>Management</u></p> <ul style="list-style-type: none"> <li>- Need to address employee morale problems</li> <li>- Handled layoffs of marketers well("they just disappeared")</li> <li>- Mgmt assign staff projects they don't understand themselves</li> <li>- Make impulsive decisions</li> <li>- Do not consider learning curve when pursuing new projects</li> <li>- Want to do everything in-house instead of bringing in outside help</li> <li>- Mgmt needs to get more involved in hands-on work</li> <li>- Not serious about supporting innovative ideas from staff</li> <li>- Not willing or too busy to help new hires</li> </ul>
<p><u>Internal &amp; External Context</u></p> <ul style="list-style-type: none"> <li>- Uncertain economic conditions</li> <li>- Increasingly complex regulations</li> </ul>	<p><u>Internal &amp; External Context</u></p> <ul style="list-style-type: none"> <li>- History of being "burned" by outside consultants</li> </ul>

Table 6. Differences Continued

<u>Advantages</u>	<u>Advantages</u>
<ul style="list-style-type: none"> <li>- Harmonious work environment (minority disagreed)</li> <li>- Diversity of services to match client needs</li> <li>- In-house lab</li> <li>- Well publicized</li> <li>- Mgmt accessible</li> <li>- Good benefits</li> <li>- Multidisciplinary concept/philosophy that focuses on industry</li> <li>- Like the leader</li> <li>- "One of the best places I've ever worked"</li> <li>- Most mgmt willing to help staff</li> <li>- Highly client responsive</li> <li>- In-house newsletter</li> </ul>	<ul style="list-style-type: none"> <li>- Creative group of people</li> </ul>

Table 6. Differences Continued

<u>Marketing</u>	<u>Marketing</u>
<ul style="list-style-type: none"> <li>- Need to hire marketer who understands environ biz</li> <li>- Engineering marketer needs to learn about whole company</li> <li>- Against training staff for marketing (needs special personality)</li> </ul>	<ul style="list-style-type: none"> <li>- Engineering marketer also needs to market civil engineering, not just chemical</li> <li>- Need to train staff in marketing</li> <li>- Mgmt not explicit about who is to market</li> <li>- Try to sell outdated or unproven technology/services</li> <li>- Engineers left out of multidisciplinary marketing projects</li> <li>- Need to create marketing teams</li> <li>- Need integrated marketing approach</li> <li>- Staff need to understand company niche in order to market</li> <li>- Need for senior managers to support/train marketing teams and staff rather than market themselves</li> <li>- Engineering marketing focus on chem engineers, not civil engineers</li> <li>- Civil engineers need experience in marketing</li> <li>- Need to let engineers lead multidisciplinary marketing projects more often</li> <li>- Time needs to be allocated for marketing</li> <li>- Need to focus less on new projects in order to build learning base</li> </ul>



While Group A, the homogeneous group of engineers, and Group B, the laterally heterogeneous group, had similar ideas about the company, they also had many differences as illustrated in the Table 6. In particular, Group B emphasized human resources issues more than Group A, such as morale, communication, management approach, and were able to discuss more advantages to working for the company. Group A offered fewer ideas, with the exception of marketing, and both were able to identify approximately the same amount of learner needs.

### **Trust**

Group A was plagued by distrust among three of the members toward the fourth, as discussed earlier. The literature suggests that homogeneity, both vertically and laterally, will enhance trust and comfort among participants. The findings from this study indicate that members from different departments feel more trusting and secure than those from the same department. This was indicated by Group B's willingness to discuss more interpersonal (and less safe) issues than Group A. Each participant shared experiences with the company and information was received and built upon by other group members. In addition, two of the group members discussed their lack of communication with each other during the meeting.

Members of Group A were also explicit in their distrust to the moderator of one of the members and one also expressed distrust of the process. The homogeneous group of engineers expressed distrust that one of the members of the group would return to management with confidential information shared during the meeting. In addition, although they were all staff level, chemical engineers had more informal power than civil engineers in this company and those with more tenure were deferred to by members with less seniority. Although these differences were also present in the lateral heterogeneous group, the members did not defer on the basis of specialty or seniority within the company.

It is possible that by removing people from intact work groups or departmental affiliations, they feel freer to discuss personal feelings about their work and co-workers. This process of removing people from their departments may free them from group norms that have developed within their departments.

It is possible that lateral heterogeneity might actually enhance trust and openness in a group setting.

### **Group Developmental Stages**

In addition to producing a greater diversity and number of ideas, Group B also differed from Group A in their approach to group discussion. Group B had a random, spontaneous style,

which was demonstrated by their numerous responses to the first question, while Group A was more linear in discussion, producing one idea for each question.

Members of Group B experienced all stages of group development: forming, storming, norming, performing and mourning. Members of Groups A, C and D spent more time in the forming and storming developmental stages than in norming and performing.

Members of Group B acknowledged that the meeting was a learning experience, they offered support for other members' ideas, demonstrated trust by discussing personal experiences, and experienced apprehension about terminating the meeting (mourning). In addition, a wider variety of ideas and conflicting opinions were expressed earlier during the discussion than in the laterally homogeneous group. This group was more random, spontaneous and dynamic than the homogeneous group. The beginning of the meeting resembled a brain storming session, and then the rest of the meeting discussed in more depth the issues brought forth earlier in the meeting. The members frequently disagreed with one another, which would result in more discussion rather than silence as it did in Groups A, C, and D. This group also gave more acknowledgment of others' contributions in the company. Performing in this group involved all four members identifying learner needs and solving problems (see degree of participation). The mourning

phase was characterized by questions about the use of the results and ended with positive feedback about the company and the focus group experience, while the homogeneous group could not find many positive things to note about the company and tended to be more pessimistic in outlook.

In addition, it is interesting to note that moderator influence differed in Group B. The group appeared more self-directed and in control of the meeting, with the moderator merely asking probing questions. In this group, members appeared to identify issues more often themselves, whereas in the other three groups, the moderator asked questions and brought up issues more often.

It is also possible that this high degree of participation is due to the changing nature of pairing during this group meeting. Members appeared to begin building new relationships, by discussing personal feelings and were interested in others' experiences. Because members in the homogeneous Group A already knew each other well, this may be why they did not ask as many questions of each other.

### **Conformity**

Members of the homogeneous group, Group A, did not freely and easily experience storming through expression of differences of opinion. Members who offered differing opinions were quickly "convinced" by group members and remained silent.

In the laterally heterogeneous group, storming did not appear to have the same effect. In fact, members would voice their disagreement and minority opinion often. These observations bear out the theory of stages of conformity, in which members use reason, seduction, coercion and finally isolation to get members to agree. Bob in Group A was pointedly ignored and isolated from the group shortly after its beginning whenever he disagreed with the majority, while Helen was not in Group B, the laterally heterogeneous group.

### **Pairing**

Pairing was observed in all groups; however, it differed remarkably in Group B, in that the pairs changed throughout the meeting. Helen and Lois paired in the beginning and on women's issues, as did Jerry and Mark. But Helen also paired with Jerry and Mark on separate issues and Lois was in agreement with Mark and Jerry in a disagreement with Helen. In the other groups, generally the pairs remained intact: Karen and Mike in Group D; Beth with Jane and Tim with John in Group C. In Group A, Al and Tom paired and competed, and Bill also paired with Al.

It is possible that lateral heterogeneity may have given participants the opportunity to develop new relationships in the work place, whereas lateral homogeneity might have further solidified intact pairs in the department.

In analyzing the group developmental process, it is noteworthy that pairing in many instances appeared to be a necessary part of norming in the groups. Trust may also have been an important influence on pairing, particularly in Group A. In Group A, Al and Tom and then Al and Bill would pair, but Bob never paired with any of the members. In this group, the phenomena was more 3 to 1 than 2 to 2 as was evident in Groups C and D. The phenomena of pairing was expected to be observed in all groups because the numbers were always four to each group, increasing this likelihood.

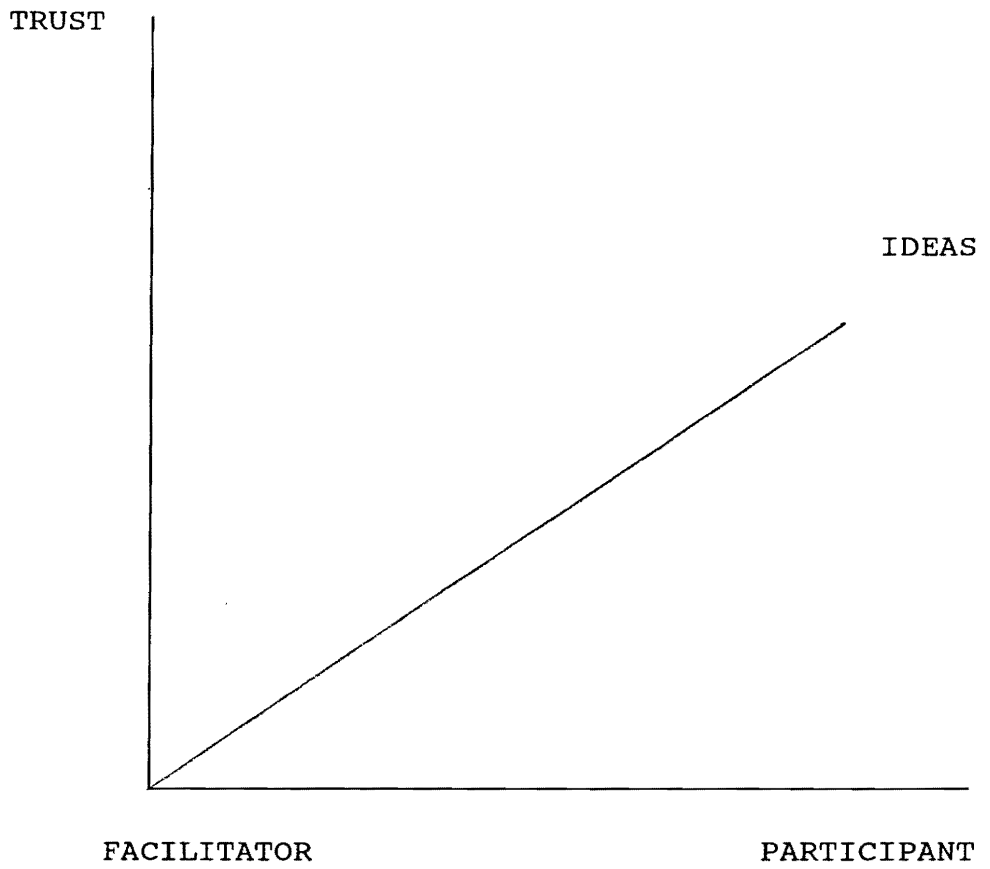
In Group A, there also were a few instances of the two civil engineers pairing, but the two chemical engineers did not. While this group were laterally homogeneous engineers, there were differences in sub-specialties (two civil engineers and two chemical engineers). Competition for leadership was observed between the senior chemical engineer and a newer civil engineer, who also would pair.

### **Degree of participation**

The highest degree of participation was observed in the laterally heterogeneous Group B. Conversations involving all four people, and not simply two pairs opposed to one another, were more frequently observed in Group B than in any other group. In Group A, one of the members was ignored or disagreed with often, while the other more introverted member expressed

distrust of the process later in the meeting. In Group C, the two pairs remained constant throughout the meeting and the pairs would disagree with one another. In Group D, management only appeared to pair and the two staff level employees neither paired with each other nor management, but just did not participate fully. A relationship possibly exists between the changing nature of the pairs in Group B and the higher degree of participation.

Group B appeared to have the highest degree of participant direction and trust, which possibly contributed to the greater wealth and diversity of ideas. A model illustrating these relationships follows.



**Figure 3. Model of Participant Direction and Trust**



**Awareness of need for change**

In Table 2, you will notice that in the homogeneous group, group discussion focused on departmental problems and did not produce the variety of ideas that the laterally heterogeneous group did. The homogeneous group ended the session by expressing feelings of hopelessness about the company's future, while the laterally heterogeneous group was able to identify many positive attributes about the company. While the laterally heterogeneous group experienced this phase when identifying problems, they also moved quickly from identifying needs to generating possible alternative solutions. This natural tendency to move from just discussing problems toward solving them was most evident in this group.

This group also gave a better understanding of the historical context of the organization and were able to identify and discuss positive attributes of the organization. Because the discussion was not focused solely on one department in Group B, a broader, more wholistic perspective on the company was reflected in their ideas (see Table 6, Differences). They discussed how problems affected the laboratory, business administration, field and management, and also indicated empathy and new understanding for others' experiences in the organization.

All groups appeared to be prepared to some degree for a

change in the organization, with the possible exception of Group D. All of the groups but Group D wanted to know what was going to be done with the results, what action was going to be taken. In fact, on the feedback form, a member of Group C complained that actions needed to be taken to solve the organization's problems. I believe this focus group study successfully assisted three of the four groups from the Frozen to Unfrozen phase in Lewin's cycle of change (Lewin, 1951). The group who appeared most ready for change was Group B, who also was not afraid of disclosure. One of the members asked the moderator to tell the CEO everything they said, regardless if it identified her, whereas in Group A, the engineers were concerned that the information would indicate who they were. Regardless of anonymity issues, Group B felt it was important to share information with management.

### **Influence of individual issues on group process**

While it is common, indeed desirable, for members of focus groups to bring issues and perspectives to group meetings with them, sometimes lone or sole focus on one member's problems can detract from a productive group meeting. Members in both of the vertically homogeneous groups appeared to have issues they wished to address, but only in Group A, the laterally homogeneous group, did one member appear to hold

up discussion. Tom repeatedly referred to personal experiences in the company, dominated discussion and would draw conversation back after it was moving toward a new issue.

In Group B, three of the four members -- Helen, Jerry and Mark -- all appeared to have issues of personal importance to them that they wished to have addressed by the group. Helen wanted to address field worker morale and sexism, Mark technical employees burdened with administrative and clerical work and Jerry wanted to discuss lack of communication between headquarters and the field and lack of supervision. Each of these issues was addressed, with other members commenting about them. The issue of employee morale was the one issue that appeared to not be resolvable at one point during the discussion, but Helen was not the only group member to continue to bring it up. Eventually the issue was talked through and discussion moved forward.

**Research question 2**

This study provided further support for the theory of vertical commonality, which proposes that groups be composed of individuals who are vertically homogeneous. Results to Research Question 2: In what way does vertical heterogeneity affect the quality of focus group discussion? found that group members tend to defer to others who appear more knowledgeable or powerful due to their position.

**Quality of ideas**

Because management dominated the discussions in the vertically heterogeneous groups, most of the data generated tended to have a management perspective. The diversity and abundance of ideas was significantly less in the vertically heterogeneous groups than in both of the vertically homogeneous groups. Both Groups C and D tended to de-emphasize interpersonal issues such as morale. You will see in Table 7, Similarities, that there is no data in the Morale category that was the same between these two groups. In Table 8, Differences, you will notice that there is very little information in these categories when compared to Tables 5 and 6 of the vertically homogeneous groups.

While there were fewer ideas, the researcher did gain a better perspective about the roles and problems of middle management in this company, management structure and informal

power. Middle management did have a unique perspective on learning in the work place and particularly in Group D considered themselves to be part of the problem by not providing more frequent feedback and review for new employees.

Tables 7 and 8 compare and contrast the ideas between the two vertically heterogeneous groups in the study, Groups C and D. By comparing the quality of ideas produced by the heterogeneous groups in Tables 7 and 8 to the vertically homogeneous groups in Tables 5 and 6, it becomes apparent that vertical heterogeneity adversely affected the quality, diversity and abundance of ideas produced in the group process in this study. In addition, lateral heterogeneity, when combined with vertical heterogeneity, produced the fewest ideas in this study.

**Table 7. Similarities between Group C and D**  
**Vertically Heterogeneous**

<p><b>Workplace Learning</b>  - Many learning opportunities exist (employees are not pigeon holed)</p>
<p><b>Morale</b></p>
<p><b>Business Planning</b>  - Tendency to procrastinate  - Need more long-term planning</p>
<p><b>Resources/Support</b>  - Need more business</p>
<p><b>Marketing</b>  - Need clear, focused marketing strategy  - Need marketers with technical background</p>
<p><b>Management Approach</b>  - Need to provide more frequent feedback  - Don't face personnel problems</p>
<p><b>Communication</b>  - Need to hold more meetings  - "Ball gets dropped"--need continuity from project to project</p>
<p><b>Structure and Procedures</b>  - Procedures/templates are available  - People not confined by discipline</p>
<p><b>Internal and external context</b>  - Need to replace LA Clarke with another large project  - History of extravagant spending</p>
<p><b>Advantages</b>  - Flexible working environment  - Client focused  - Diversity to offer choices for client  - Quick responsiveness</p>

**Table 8. Differences between Groups C and D**

Group C: Laterally Heterogeneous	Group D: Laterally Homogeneous
<p>Workplace Learning</p> <ul style="list-style-type: none"> <li>- Many learning opportunities - No resources for professional development</li> <li>- Need to decrease mgmt training burden by hiring experienced employees</li> <li>- Training increases hours billed</li> <li>- Current learning on the job ("seat of the pants") approach is best</li> <li>- Need to train on marketing</li> <li>- Need to train in time mgmt</li> </ul>	<p>Workplace Learning</p> <ul style="list-style-type: none"> <li>- Need to train receptionist</li> <li>- Need for cross training</li> <li>- Need new hire training</li> <li>- Mgmt opinion: "seat of the pants" approach is best</li> <li>- Need training in lab</li> <li>- Need organizational skills</li> <li>- Training in mgmt skills and financial planning</li> </ul>
<p>Morale</p> <ul style="list-style-type: none"> <li>- Everyone gets along</li> <li>- Some people don't work hard enough (except in field)</li> <li>- Some tend to blow problems out of proportion</li> </ul>	<p>Morale</p> <ul style="list-style-type: none"> <li>- Poor job security</li> <li>- Need for morale building activities</li> <li>- Company keeps people who are unproductive</li> <li>- In the past, hired people with poor interpersonal fit</li> <li>- Technical people have to do admin work is demoralizing</li> <li>- Unfair salaries</li> <li>- People not promoted because of current circumstances</li> </ul>

Table 8. Differences Continued

<p>Business Planning</p> <ul style="list-style-type: none"> <li>- Need more long-term planning</li> <li>- Missed deadlines are NOT a problem</li> </ul>	<p>Business Planning</p> <ul style="list-style-type: none"> <li>- Need to replace LA Clarke</li> <li>- Too 1 client dependent</li> <li>- Need to diversify</li> <li>- Need to plan marketing calls</li> <li>- Need more long-term planning</li> <li>- Charlottesville plans better</li> <li>- Schedules not followed</li> <li>- Need planning meetings</li> <li>- Less interesting projects tend to be shoved aside</li> <li>- Too many #1 priorities in lab</li> <li>- Lab goals are clear</li> <li>- No continuity between projects for staff (feel jerked around)</li> </ul>
<p>Resources/Support</p> <ul style="list-style-type: none"> <li>- Rates exceed budgets</li> <li>- Need more new business</li> </ul>	<p>Resources/Support</p> <ul style="list-style-type: none"> <li>- Extravagant spending</li> <li>- Mgmt feel employees paid well; non-mgmt believe staff level not paid well</li> <li>- Need more &amp; better qualified support staff</li> </ul>
<p>Marketing</p> <ul style="list-style-type: none"> <li>- Minority: Different projects coming so outlook is good</li> <li>- Majority: Need more new biz</li> <li>- Skeptical about South American marketing project</li> </ul>	<p>Marketing</p> <ul style="list-style-type: none"> <li>- Marketing approach too focused</li> <li>- Need marketers with technical background</li> <li>- Need to have marketing meetings</li> <li>- Need time commitment for marketing</li> <li>- Mgmt. send incompetent personnel to market</li> </ul>



Table 8. Differences Continued

<p>Management Approach</p> <ul style="list-style-type: none"> <li>- Need to delegate more</li> <li>- Conflicting directives</li> <li>- Chain of command unclear</li> <li>- Charlottesville mgmt make decisions affecting Sterling</li> <li>- Field needs clearer direction</li> <li>- Field needs to see managers more often</li> <li>- Mgmt doing more work increases costs</li> </ul>	<p>Management Approach</p> <ul style="list-style-type: none"> <li>- No follow through</li> <li>- Some helpful and others not</li> <li>- Mgmt has big picture and won't share it with employees</li> <li>- Employees reluctant to seek help</li> <li>- No quality/review process in place</li> <li>- Mgmt carries people</li> <li>- Need to be better organized</li> <li>- Don't inform staff about upcoming projects</li> </ul>
<p>Communication</p> <ul style="list-style-type: none"> <li>- Mgmt needs to be more explicit</li> <li>- Employees don't need to know what other depts doing</li> <li>- Lab needs better advance notice</li> <li>- Conflicting directives</li> </ul>	<p>Communication</p> <ul style="list-style-type: none"> <li>- Mgmt don't inform staff about projects</li> <li>- Newsletter is helpful</li> <li>- Need protocol for assigning projects to correct person</li> <li>- Calls not getting to the right person</li> <li>- Need to know who is doing what</li> <li>- Need to train receptionist</li> <li>- Need to understand other depts capabilities</li> <li>- Need to discuss proposals</li> <li>- Missed deadlines a problem</li> </ul>

Table 8. Differences Continued

<p>Structure and Procedures</p> <ul style="list-style-type: none"> <li>- Lab processes not followed</li> <li>- Inconsistent procedures/processes</li> <li>- Organization top heavy</li> <li>- Loss of staff level expertise affects quality</li> <li>- Company is well integrated</li> <li>- Need to hire more mid-level staff</li> </ul>	<p>Structure and Procedures</p> <ul style="list-style-type: none"> <li>- Some fragmentation necessary for groups to be self-supporting</li> <li>- Company is open and fluid</li> <li>- Staff may not be aware of existing procedures</li> <li>- Disorganized image</li> </ul>
<p>Internal &amp; External Context</p>	<p>Internal &amp; External Context</p> <ul style="list-style-type: none"> <li>- Small company mentality</li> <li>- Big projects brought to company by outside attorney</li> <li>- As company grew, mgmt could not let go of little things</li> </ul>
<p>Advantages</p> <ul style="list-style-type: none"> <li>- Honest with client</li> <li>- In-house expertise</li> <li>- Competitive rates</li> <li>- High quality field workers</li> </ul>	<p>Advantages</p> <ul style="list-style-type: none"> <li>- Commitment to client</li> <li>- Not involved with federal government bureaucracy</li> <li>- R&amp;D devoted too reducing client costs</li> <li>- Lab is a competitive plus</li> <li>- Lab competitively priced</li> <li>- Open supervision</li> <li>- Enough time to do work (minority opinion)</li> </ul>

**Trust**

It is possible that lack of trust is a factor in why these vertically heterogeneous group discussions produced less data and lasted a shorter period of time. The non-management staff level employees talked significantly less than the management. In Group C, in numerous occasions, the staff level employees were talked over or corrected, and then would remain silent. One of the women in this group approached the moderator following the meeting to say she did not trust one of the managers who was present during the meeting.

Because this organization, on paper, has a matrix structure, this researcher wanted to explore the theory of heterogeneity in an organization in which client needs were purportedly what drove projects, not hierarchical position. The focus group data did not support such an approach; rather power was determined by position within the company, then departmental affiliation. Departments and their order of power include: President, Environmental Sciences, Research and Development, Marketing, Engineering, Laboratory Services, Field Support Services, Administration. This is why John, who had the same management level as Tim, dominated conversation over Tim and inferred a special relationship with the President in Group C's discussion. This trust issue affected all of the groups. In Group B, however, participants seemed

most concerned with what action plans were going to be taken rather than a participant or the report disclosing a confidence. From this study, vertical heterogeneity and lateral homogeneity appeared to affect trust of participants toward one another.

### **Group Developmental Stages**

Members of the vertically heterogeneous group did not experience fully norming and performing stages. They also had more difficulty storming. Members would compete for leadership and pair, while others would conform and remain silent if disagreed with. They did not acknowledge others' contributions and engage in group maintenance behaviors as they did in Group B, and to a lesser extent in Group A. Because norming did not occur, performing was not observed because rarely did all four members participate in problem solving and identifying learner needs.

Because the staff level employee members of vertically heterogeneous groups did not feel safe, they could not move toward norming and performing. The issue of trust significantly affected the heterogeneous groups' progression through group developmental stages of forming, storming, norming, performing and mourning.

**Pairing**

As discussed in results of research question 1, pairs changed in the laterally heterogeneous and vertically homogeneous Group B. Because pairing changed throughout the group meeting, this researcher speculates that it increased participation among members of the group. In Group A., which was both vertically and laterally homogeneous, there also appeared to be little pairing. Al and Tom would both compete for leadership and pair. Toward the end of the meeting, a third member would occasionally pair with Al, so that it was more 3 - 1.

In both vertically heterogeneous groups, pairing was more obvious and remained constant. In Group C, the two male managers and two female staff level employees paired. In Group D, the two managers paired, but the two staff level employees did not (and neither did they participate fully).

**Degree of participation**

Members who were not managers in the two groups that were vertically heterogeneous did not participate as fully as those who held management positions. The lowest quality discussions, however, were found in Group D, which was both laterally and vertically heterogeneous. Both of the staff level employees remained unresponsive during the meeting, usually talking only

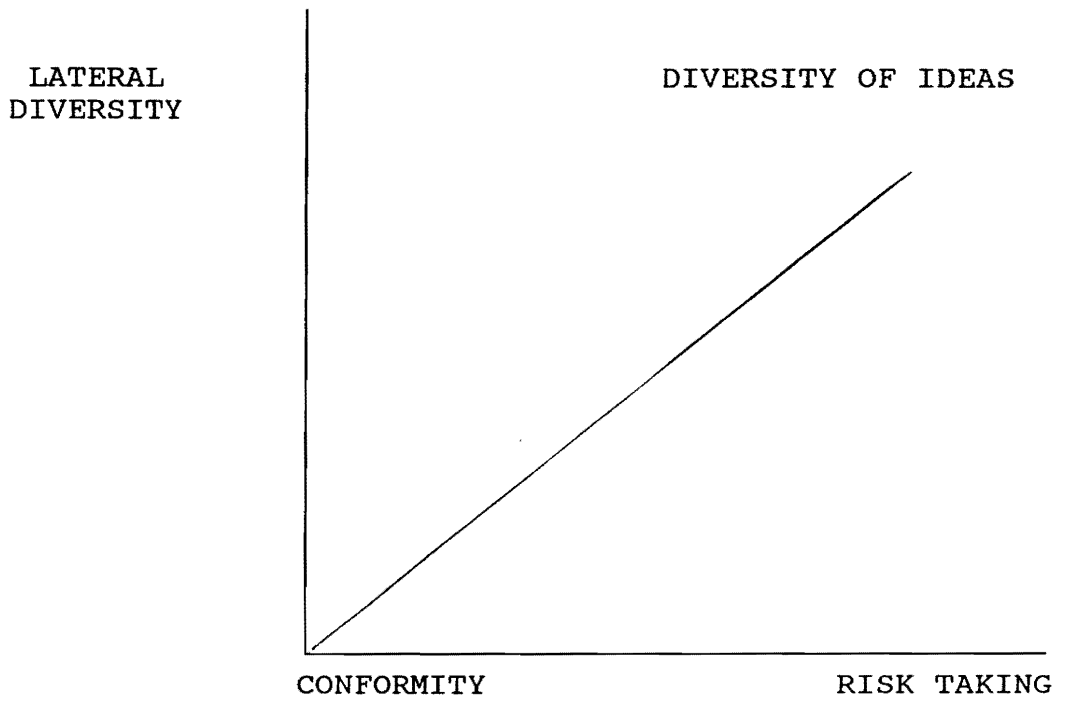
when called upon by the moderator. In addition, the group meeting itself was the shortest among all four of the group meetings. In Group C, which was laterally homogeneous and vertically heterogeneous, the staff level employees participated more but also paired together, which did not happen in Group D. It is possible that lateral homogeneity provided some common ground as the basis for discussion among the group of laterally homogeneous chemists who were also vertically heterogeneous.

### **Conformity**

Members who offered differing opinions were either quickly "convinced" or interrupted by group members in the vertically heterogeneous groups, which bears out the theory of conformity stages, in which group members use reason, seduction, coercion and finally isolation to keep members in alignment with the group (Tubbs, 1984). Conformity was evident by members remaining silent and not challenging discussion, even when asked for their opinion, or by expressing an opinion and then changing it after being persuaded by the group. Conformity was most evident in the vertically heterogeneous groups, mostly by silence and not arguing once rebuked as in Group C. It also is important to note that it was evident as well to a lesser degree in Group A, which was vertically and laterally homogeneous. In Group A, the members also deferred

to the most senior participant on occasion.

From the analysis of all four group discussions, there appeared to be a relationship between lateral diversity and risk taking. As risk taking (or sharing of personal feelings and expression of opinion) increased, with the presence of lateral diversity, so did the diversity and abundance of ideas, as illustrated in Figure 3, which follows.



**Figure 4. Idea Generation and Risk Taking**



**Influence of individual issues on the group process**

Management in both vertically heterogeneous groups appeared to voice issues of concern they had to the meeting. Tim appeared concerned about laboratory marketing and John about marketing in general in Group C. Similarly, Karen also appeared concerned about marketing while Mike wanted to discuss violation of chain of command. These issues dominated discussion in these groups, perhaps because members would defer to management, and possibly consider their concerns of more importance than staff level members.

**Awareness of need for change**

The vertically heterogeneous group discussions did not produce the diversity of ideas that Group B did, however they did provide a management perspective that was missing in the vertically homogeneous groups. Because management dominated both of the vertically heterogeneous meetings, it appears that participants did not express a need to change the way they worked or the way the organization operated. Both of the management meetings tended to focus on departmental problems of interest to management in the meeting, and did not focus on a variety of areas needing change in the organization. For example, Group B discussed field, laboratory, engineering, marketing, environmental sciences and business administration

departments. Group D discussed mostly problems in the laboratory, environmental sciences (and marketing for environmental sciences), and a little on field support. Members of the heterogeneous groups did not often acknowledge others' contributions to the organization or recognize the impact of problems in other departments on themselves. Because power was given according to position in the company, participants tended to defer to management.

### **Confounding variables**

Gender and cultural diversity were variables that were not controlled for in this study.

#### **Gender diversity**

Three of the four groups had women, while Group A, the engineers, were all male. The group that was laterally homogeneous (chemists) but vertically heterogeneous was composed of two staff level chemists who were women and two male managers. These gender based and vertical differences might have heightened this tendency to defer to male colleagues with more hierarchical power and position. One of the female members of this group approached the moderator after the meeting and said the group meeting would have been better if one of the male managers had not been present

because he was not trusted and frequently dominated discussions. Although these findings might be attributed to gender differences rather than hierarchical ones, Webber (1987) found in a descriptive research study of college students that both male and female attitudes about women in leadership roles has changed since the 1960s. Women and men are more comfortable with women who do not conform to group norms and who assume leadership. Both Groups B and C had women members. In Group B, one of the women was a leading member. In Group C, the women talked, but were frequently dominated by management and deferred to them. In this study, the data seem to indicate that vertical differences influence the quality of group discussion more than gender diversity.

### **Cultural diversity**

The effects of cultural diversity also appeared minimal. All of the groups, except Group B, had members of ethnic minorities. In two of those groups, the ethnic minorities were highly active participants. In Group A, the ethnic minority was a leader and in Group C, the ethnic minority manager began the meeting and frequently dominated discussion, although he also was a member of management. In Group D, the ethnic minority member was very reticent and did not actively participate, but he was a staff level employee in a vertically heterogeneous group.

### **Group size**

Research on group size indicates that quality increases with group size, but that speed increases as group size decreases. In this study, all groups were composed of four participants each. Both quality and speed appeared to be more closely related to the variable of heterogeneity than to group size, since all groups consisted of only four participants. In addition, the literature suggests that groups of even numbers, such as used in this study, have a higher propensity for disagreement than groups of odd numbered participants, and smaller groups are more inhibited in expressing dissatisfaction and disagreement (Thomas & Fink, 1963).

While pairing occurred in all four groups, it did not remain constant in the highest quality group, Group B, and was much less evident in the vertically homogeneous groups than in the vertically heterogeneous groups. Members in three of the four groups expressed dissatisfaction with the company or disagreement with one another. Only Group D, which was both vertically and laterally heterogeneous, appeared to almost completely avoid conflict. Full expression of differences of opinion was most often observed in Group B, laterally heterogeneous and vertically homogeneous. On the issue of expression of dissatisfaction or disagreement, heterogeneity again appeared to be a more important factor than group size or whether the groups were odd or even numbered. The unique

nature of these groups, this setting and lack of control of other variables makes it difficult to attribute the degree of expression to the issues explored in this study.

Three of the groups had ethnic minority members as participants, all four had female participants and all were composed of four members each, indicating that it is possible the differences in quality among the groups might be attributed to the variables studied: lateral and vertical heterogeneity.

The significance of these findings, application in the field and issues for further research are discussed next in Chapter V. Conclusions.

## CHAPTER V

### CONCLUSIONS

Two research questions on focus group composition were explored at an environmental consulting company:

1) In what way does lateral heterogeneity affect the quality of focus group discussions assessing organizational and learner needs?

2) In what way does vertical heterogeneity affect the quality of focus group discussions assessing organizational and learner needs?

The effects of lateral and vertical heterogeneity needed to be explored in focus groups because of the paucity of field research on this issue in small, temporary groups and theoretical assumptions recommending homogeneity in the focus group literature. Evidence suggesting a relationship between creativity and the tension created by diversity in long-term groups has been documented in other fields, such as education and management. Vertical heterogeneity was explored because this company operated in theory as a matrix organization, which is based on a sharing of power and resources. It was possible that one's position in a company would not significantly influence group development.

Results to Research Question 1 indicate that in this the quality of focus group discussion might be attributed to lateral diversity, provided members are vertically

homogeneous. Findings from this study provide further support for the current assumption in the focus group literature recommending vertical homogeneity, which was explored in Research Question 2. The higher degree of trust and openness found in the laterally heterogeneous and vertically homogeneous group might be attributed to lateral diversity. The participants might have been freed from group norms held by their particular departments.

The higher disclosure of trust and sharing of feelings in the laterally heterogeneous group possibly indicates that they began experiencing the unfreezing stage of the change process. This unfreezing process begins by questioning and challenging current assumptions about work, which was not observed in the laterally and vertically homogeneous group of engineers, who did not express a need for change to the degree observed in Group B, the laterally heterogeneous group.

Because the groups were composed of even numbered participants, the researcher predicted that pairing would occur. The phenomena of pairing was unique in the laterally heterogeneous and vertically homogeneous group in that it appeared to change according to the issue under discussion. Pairs changed and fluctuated during the group process, with different participants pairing with each other throughout. In contrast, the same two members appeared to both pair and compete with one another in the homogeneous Group A.

In the vertically heterogeneous groups, pairs remained unchanged along hierarchical lines. A relationship was also observed between pairing and performing and between storming and performing in Group B. Open expressions of differences of opinion were more frequent in Group B, than the other three groups. Because staff level employees in the vertically heterogeneous groups did not participate as fully as management, this researcher speculates that differences of opinion existed, but were not expressed due to this vertical diversity.

Vertical heterogeneity appeared to increase the probability of intact pairing, conformity and to decrease storming, participation, expressions of trust, and ideas. These four groups, however, differed on other parameters as well as lateral and vertical heterogeneity, which may also have affected group dynamics.

### **Application of findings**

When researching complex issues, such as in an organizational analysis like this study, the facilitator of focus group discussions might want to arrange small laterally heterogeneous groups. Lateral heterogeneity might provide a learning environment that heightens participants' wholistic awareness of the organization. Participants in heterogeneous focus groups might feel freer to discuss personal feelings



about their work when they meet with other organizational members who are outside their departments. By bringing diverse individuals together, group discussions can provide an environment in which individuals begin to recognize shared problems and concerns, develop an understanding and appreciation of other functional specialties and their contributions to the organization.

Moderating a successful heterogeneous group in this study required the same facilitation skills currently proposed in the literature for homogeneous groups: keeping individuals focused on the same purpose, and not allowing domineering participants to explain their experiences repeatedly.

Rather than the researcher interviewing several homogeneous groups and pulling the data together, the data from Group B revealed a wholistic picture of the organization. Incorporating diversity in focus groups may heighten the learning process as well as provide a more efficient information gathering process and higher quality results.

While the purpose of these meetings was for needs analysis, the laterally heterogeneous group began an awareness of need for change in that members began to move toward developing informal communication networks, a broader appreciation and understanding of others, and the purpose of the company rather than their narrow specialized job.

As was the case in this study, intact working

relationships might lead to pairing, where people are well known to each other in the work environment. In such a case, it might be beneficial to organize focus groups of people who do not work closely together in order to prevent constant pairing, and enhance participation.

Focus group researchers may want to compose groups of laterally diverse, but vertically homogeneous, participants when conducting a broad organizational assessment in order to gain a wholistic perspective and prepare participants for change in the organization.

#### **Issues for further research**

The effect of lateral heterogeneity in focus group discussions needs to be further explored in other organizational structures and environments. The influence of vertical heterogeneity on the quality of group discussion may not be as noticeable in organizations with flat structures or in larger organizations where employees may not defer to managers of other departments.

The theory of heterogeneity, which proposes a relationship between creativity and diversity in groups, has been applied with success in the research and organizational settings to interpersonal training and work groups. It would be helpful to explore this issue in focus groups in other settings and for other purposes.

A larger study of the effects of vertical heterogeneity in differing organizations using matrix, team-based and departmental structures might find different results. It would also be worth studying the effects of lateral heterogeneity in other disciplines in order to determine if differences would exist in the quality of group dynamics among the participants. Because of the unique nature of these groups and this organization, more data on these research questions needs to be explored before conclusions or recommendations can be made on focus group composition and lateral and vertical heterogeneity.

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APPENDICES  
**INTERVIEW GUIDE**

Introduction:

Thank you for coming today to discuss your views on some of the challenges ENVIRONMENTAL CONSULTING is currently facing. As you know from the memorandum sent to you earlier, management here want and need your input in order to address some of the problems this organization is currently experiencing. This can be done only by a frank and open discussion of your views of these problems. I would like for you to consider this as an opportunity for you to express your thoughts honestly because I've been given the responsibility of collecting information on ENVIRONMENTAL CONSULTING' problems and feed back general recommendations.

The discussion today will be tape recorded to free me from note taking and for accuracy. These tapes will not be made available to anyone else in this organization. Your responses will remain confidential and I ask that you not discuss your responses or those of other group members outside this meeting.

Information gathered here today will be used to make general recommendations to management about problems in the organization. While a firm commitment was not made at this time concerning potential training events or other future changes, I do know that Larry supports continuing education outside the organization by tuition reimbursement, training workshops. In addition, his interest in employee perspectives

to discussing the problems in his organization.

I'm sure some of you realize that I'm married to Robert and may have concerns about confidentiality. Let me assure you, I learned more about this organization from Larry than I did from Robert. I am committed to keeping these discussions anonymous and that includes not discussing anything here with Robert. Does anyone have any objections to having their responses recorded? Does everyone know everyone else?

1. What are some of the challenges ENVIRONMENTAL CONSULTING is now facing?

How do these problems impact you and the quality of your work here?

2. What is your greatest concern at ENVIRONMENTAL CONSULTING? Why? (For example, why is ENVIRONMENTAL CONSULTING not increasing client base? Is there something you need to know to improve your work? )

3. What does ENVIRONMENTAL CONSULTING do well? What could be better? Why? What do you do well? What would you like to do better?

4. What specifically contributes to productivity and efficiency at ENVIRONMENTAL CONSULTING and what blocks it (externally and internally)?

5. How does ENVIRONMENTAL CONSULTING differ from other similar consulting firms in the field? What are its competitive advantages and disadvantages? (Draw upon observations and previous work experiences).

6. In reflecting back to when you first started working here, what was helpful to you in learning your new responsibilities? What was not? In what way? Why?

7. What do you find helpful here and what things do you not find helpful in fulfilling your job responsibilities? For example, procedures and policies (assignment of tasks, task explanations, quality of group meetings, interpersonal dynamics, access to learning resources...)

8. What facilitates clear communication and what does not (both within and external to the department) ? (in regard to task assignments, defined job responsibilities, access to key personnel and equipment resources.)

9. How are project assignments given and how are instructions for the work communicated? By whom? Does it change according to project? Describe the process of intradepartmental communication (between and among, for example, engineers and environmental and lab).

## INITIAL RESEARCH PLAN AND LOGISTICS

### 1. Tentative Research Schedule

Action	Date
I. Interview President, HYDROSYSTEMS	19 August
II. Development/approval of interview guide	16 September
III. Focus group meetings	24 September- 16 October
IV. Analysis of results	13 November

The original dates changed so that the study was concluded in mid-November rather than October due to client needs and personnel shortages during late October and early November.

### 2. Logistics

HYDROSYSTEMS' conference room was reserved for at least 3 hours the day of the scheduled focus group meetings. Interviews were held from 3-6 p.m. (which allowed for an extra hour in case they ran over).

### 3. Tentative Focus Group Schedule

Homogeneous non-management group(s)	Sept. 24
Laterally heterogeneous/vertically homogeneous group	Sept. 29
Vertical/laterally heterogeneous group	Nov. 10
Laterally homogeneous/vertically heterogeneous	Oct. 8

### 4. Resources

1. An on-site conference room on scheduled dates for focus group meetings
2. Printer for results and questionnaires
3. HYDROSYSTEMS' business plan
4. Personnel for focus groups

### 5. Materials

A-Frame, paper and markers  
Audiotape cassette recorder  
name tags

**LETTER TO PRESIDENT**

Shelly Smith Moore  
Leesburg, VA 22075

6 August, 1992

Larry Sanders,  
President, ENVIRONMENTAL CONSULTING  
Virginia

Dear Mr. Sanders:

Thank you for this opportunity to identify and assess training needs in your company using the focus group technique. There are many benefits to utilizing the focus group method for identifying training needs. They include:

- \* An undertaking of this nature implicitly boosts morale; you are telling employees that you want their input.
- \* The group process utilized in this research project is a dynamic one. Respondents can build, improvise, and improve on one another's ideas. A respondent who normally is reticent during a meeting can suddenly be caught up by the excitement and begin contributing ideas.
- \* The focus group technique is a qualitative research tool. It enables the researcher to explore why people feel or think a certain way. Its openness and fluidity allows for the contributions of new ideas and previously undiscovered attitudes that may not be measured by a quantitative device such as a survey instrument or structured individual interview.
- \* This technique fosters employees' desire for learning by involving them in the process of identifying training needs. People welcome training once they believe that their work will improve if they operate more skillfully and that training can

provide those skills.

A disadvantage of qualitative research is that we may not be able to draw inferences about the entire population.

Enclosed you will find a list of questions about your organization. The answers to these questions will enable me to consider the perspectives of your organization when exploring possible training needs in your company. I will return from vacation the week of the 16th and would like to schedule a time for us to discuss some of these questions as well as some of the other particulars of this project. I am providing you with these questions prior to our meeting so that you can give them thorough consideration. These questions are merely a guide for me to better understand your organization; I will gladly discuss any other issues you may have about this training needs analysis during our interview.

In order to gain an understanding of your organization, I also will need to interview a few members of both your management and junior level staff. In addition, we will need to determine parameters that may limit the research and set time tables. My goal is to have the bulk of the research collection phase complete by late October, leaving November and part of December for summarizing the responses. I will have a proposal outlining my research plan and contract available for you at our meeting.

The list of questions I would like to discuss with you follows. Again, thank you very much for this opportunity. I look forward to speaking with you again soon.

Sincerely,

Shelly Smith Moore

## PROPOSAL FOR ENVIRONMENTAL CONSULTING

Purpose: The purpose of this needs analysis is to identify, clarify and assess training needs utilizing the Focus Group Technique at ENVIRONMENTAL CONSULTING Inc., an environmental consulting group located in Northern Virginia. Training needs as perceived by groups of management and non-management as will be discussed and reported.

### FIVE PHASES OF RESEARCH

- I. Initial interview with President, ENVIRONMENTAL CONSULTING, and acceptance of proposal
- II. Individual interviews with 2-3 management and 2-3 non-management personnel
- III. Development of Interview Guide
- IV. Focus group meetings
- V. Results and recommendations to ENVIRONMENTAL CONSULTING

The details of this research plan follow:

#### I. Initial interview

In our first interview, we will need to discuss:

- A. Goals of needs analysis
- B. Problems of organization
- C. ENVIRONMENTAL CONSULTING' support of needs analysis
  1. Meeting rooms
  2. Dates/times
  3. Time tables
  4. Types of training ENVIRONMENTAL CONSULTING can support
  5. Rationale of procedures
- D. Confidentiality
  1. It is necessary that employees understand their responses will be kept confidential. Although summaries of the data will be provided to ENVIRONMENTAL CONSULTING, the participants in this training assessment will not be identified by name, position or any other means.

2. Audiotapes of the Focus Groups and individual responses to Structured Interviews and any other data produced by this research project will remain in possession of the moderator and shared only with members of the thesis committee at Virginia Tech. Management at ENVIRONMENTAL CONSULTING will not have access to the data, but will be provided summaries.
3. Information considered of a sensitive nature will be held confidential.
4. ENVIRONMENTAL CONSULTING will have the opportunity to review any publications that result from this project.

## **II. Structured interviews**

- A. By interviewing some management and non-management staff prior to the focus group meetings, I hope to gain a better understanding of some of the informal relationships in your organization and employees' roles and responsibilities.
- B. In order to prepare employees, you will need to draft a letter notifying them that an outside consultant will conduct interviews. It is essential that they realize their responses will be confidential and that the organization fully endorses this research undertaking. Questions will be open-ended to encourage discussion of new ideas and attitudes and last approximately 1 hour per respondent.

## **III. Interview guide**

- A. Using information from ENVIRONMENTAL CONSULTING' business plan and the structured interviews, an interview guide will be developed. The purpose of the interview guide is to provide open-ended questions that initiate and encourage discussion within the Focus Group.
- B. The interview guide provides structure for the group meeting, enabling the moderator to keep the group focused on the purpose of the meeting.

## **IV. Focus group meetings**

- A. A purposive sample of the population will need to be selected and those participants notified by letter of the



logistics of the meeting, that the session will be audiotaped for the moderator's use only and ENVIRONMENTAL CONSULTING' support of this endeavor.

- B. A homogeneous population of non-management, and a heterogeneous population of both management and non-management will meet in separate 2-3 hour sessions to discuss and assess training needs in the organization. Sessions will be audiotaped for data collection purposes only; participants' names will remain anonymous and confidential. ENVIRONMENTAL CONSULTING will receive summaries of the responses and recommendations; no names or other identification will be attached.

#### V. Results

- A. Results will be analyzed and forwarded to ENVIRONMENTAL CONSULTING in a timely manner following the focus groups
- B. Identities of individuals within your organization will not be shared.
- C. Recommendations/options based on research will also accompany results of this study.
- D. Publications that may result from this study will not contain sensitive material.

#### TENTATIVE SCHEDULE

Action	Date
I. Interview President	19 August
II. Individual interviews with employees	31 August- 11 September
III. Development of interview guide	16 September
IV. Focus group meetings	21 September- 16 October
V. Analysis of results	13 November

**LOGISTICS****Interviews:**

Individual interviews can be arranged by Shelly Moore with your prior approval and scheduled according to interviewees' convenience. Interviewees need to be informed of your support by memorandum or telephone.

**Focus group meetings:**

Your conference room will need to be reserved for at least 3 hours the day of the scheduled focus group meetings. The preferred time for these interviews is from 3-6 p.m. (which allows for an extra hour in case they run over). If they are scheduled much later, participants may be distracted by thoughts of going home for dinner and other appointments they may have after working hours. I also would prefer scheduling the meetings on Tuesdays and Thursdays, because I have class Mondays and Wednesdays. Considering the aforementioned constraints, I developed the following schedule for the focus group meetings.

Non-management group(s)	22 & 24 September
Management group	29 September
Heterogeneous group	29 September or 1 October

**RESOURCES****I will need access to the following:**

1. A conference room on scheduled dates for focus group meetings
2. Printer for results and questionnaires
3. ENVIRONMENTAL CONSULTING' business plan
4. Selected personnel for individual interviews
5. Members of focus groups

Sample memoranda to ENVIRONMENTAL CONSULTING employees informing them of upcoming activities associated with this project follow. (The questions for the individual interviews have to be developed).

**CONSULTATION AGREEMENT**

The purpose of this document is to confirm the terms of agreement on conducting a master's thesis research project on identifying and analyzing training needs using focus groups between ENVIRONMENTAL CONSULTING Inc. and Shelly Smith Moore for the consultation detailed below.

Name of consultant: Shelly Smith Moore

Dates of consultation: Aug. 1, 1992-Dec. 1, 1992

Fee: Waived as part of research study

Place: ENVIRONMENTAL CONSULTING, Northern Virginia.

Materials and Resources: Access to copier and printer for developing interview guides, memoranda pertaining to training analysis, summarizing data and developing recommendations; Conference room for focus group meetings; employee time for structured interviews and focus group interviews.

Follow-up: ENVIRONMENTAL CONSULTING will receive summarized responses of research study and recommendations for training.

Statement of disclosure: The consultant, Shelly Smith Moore, agrees to receive ENVIRONMENTAL CONSULTING' information and information relating to ENVIRONMENTAL CONSULTING' rights in confidence, not to disclose same to any person or entity (other than research faculty at the Department of Adult Education, College of Education, Northern Virginia Graduate Center) not a party to this agreement, and not to use same for the benefit of the consultant or any third party.

Any publications that may result from this study will not disclose confidential and sensitive material that may identify ENVIRONMENTAL CONSULTING or employees without the written and prior approval of ENVIRONMENTAL CONSULTING.

Shelly Smith Moore

By \_\_\_\_\_  
Title \_\_\_\_\_  
Date \_\_\_\_\_

By \_\_\_\_\_  
Title \_\_\_\_\_  
Date \_\_\_\_\_

## PRE-STUDY FORCE FIELD ANALYSIS

Using the Manual of Force Field Analysis (Baker & Paris, 1975), the following blocking and facilitating forces were identified from the interview with Mr. Sanders, the management manual and the business plan.

### Internal Blocking Forces

- \* Inability of current marketing staff to increase client base
- \* Lack of marketing initiative on part of technical staff
- \* Gap exists between senior level and entry level staff in terms of skills, knowledge and experience, causing senior level people to expend time training new people in job skills
- \* Lack of middle level staff (5 year-10 years experience) who could ease burden of senior level staff
- \* Lack of insight on part of some personnel regarding bottom line (i.e., producing cost-efficient quality work beneficial to client); these personnel sometimes prefer the costly, time-consuming option over the more expedient, cost-effective one
- \* Inability of some entry level staff to understand the whole concept of a project
- \* Some entry level staff seem overwhelmed by the complex nature of some of the projects, instead of breaking the task into its simpler steps
- \* A lack of creative and innovative ideas
- \* Some senior level staff do not explain tasks well or answer entry level staff questions in a succinct manner
- \* Some senior level staff would rather do the task themselves rather than teach entry level staff
- \* Hypersensitivity amongst women staff members to perceived chauvinism, particularly from marketing representatives
- \* Failure of some staff to use proper channels when have interpersonal complaints (they go to him, not their supervisors)
- \* Resistance to using a manual developed by Mr. Sanders to facilitate site assessments because it is considered too cumbersome by employees

- \* Staff do not take full advantage of or appreciate the diverse array of disciplines/experience represented by other staff members (several members of the staff isolated marketing)
- \* Need to cross train staff into other areas of environmental work
- \* Entry level staff are perceived as unaware of the interesting possibilities available for learning and marketing in the environmental field
- \* Certain entry level staff and engineers seem unable to cross disciplinary/specialty lines in addressing problems and tasks of projects
- \* Some entry level staff need more hand holding on projects than others
- \* Some staff seem hypersensitive to criticism and need to realize that criticism is for internal quality and review
- \* Believes the company needs to better utilize entry level staff
- \* The engineering staff is seen as isolated and uninterested in integrating with the environmental group for a multidisciplinary approach

#### External

- \* Impending loss of a major contract
- \* Current economic situation, with decrease in construction industry, but increase in foreclosure business

#### Facilitating Forces

- \* ENVIRONMENTAL CONSULTING funds related coursework for college and workshops
- \* Work teams change according to needs of individual projects
- \* Combination matrix/hierarchical structure provides accountability and greater division of work, which frees Mr. Sanders from day-to-day management of projects and makes personnel more accountable and responsible for their own work while also allowing easy access to other disciplines between departments as project needs dictate

- \* Manual for site assessments for accountability purposes helps employee remember key points to check (although apparently many staff feel it's too cumbersome)
- \* Combination of geology, hydrogeology, soils, engineering, chemistry, and biology disciplines increases marketability
- \* On-site laboratory for sample testing sets ENVIRONMENTAL CONSULTING apart from other consulting firms in the state, who need to send samples outside for testing, thereby increasing the cost to their clients
- \* Own research department, which develops new techniques that are usually client specific and billable

#### Actions:

- \* ENVIRONMENTAL CONSULTING is planning to fight through political pressure and legal recourse to regain its major contract and maintain reputation in industry
- \* ENVIRONMENTAL CONSULTING plans to increase client base and contracts by increasing marketing efforts of technical staff
- \* Marketing staff will be cut in September as well as some administrative staff, relieving some financial pressure
- \* Some entry level technical staff will be laid off
- \* Plans to reinstitute lunch time talks in which different members of organization gave short presentations on works in progress or different research ideas
- \* President and on board Latin American environmental scientist are marketing in South America, where they have made successful contacts and plan another trip in late September
- \* Has regular company-wide meetings and frequent marketing meetings with senior level staff
- \* Plans to present scope of an entire project to staff in the future, rather than handing out portions of projects without an explanation of their entire scope (Baker and Paris, 1975).

The forces identified represent an upper management level perspective on the organization and its problems.

**SAMPLE MEMORANDUM NOTIFICATION OF MEETING**

MEMORANDUM FOR JOHN SMITH

FROM: SHELLY SMITH MOORE

RE: GROUP MEETING

Your participation is requested for a group meeting to discuss ENVIRONMENTAL CONSULTING and potential training needs from 3-6 p.m. Thursday, Oct. 8, 1992, at the conference room, ENVIRONMENTAL CONSULTING, Northern Va. Your audiotaped group discussion will remain confidential and in my possession. They will be used to make general recommendations to ENVIRONMENTAL CONSULTING. To foster an environment that is supportive of anonymity, discussion of the meeting afterward will be strongly discouraged by management.

If you have any concerns about this meeting or cannot attend, please call me as soon as possible to reschedule, at 771-4183.

MEMORANDUM OF SUPPORT

10 September, 1992

MEMORANDUM FOR ENVIRONMENTAL CONSULTING EMPLOYEES

FROM: Larry Sanders, President, ENVIRONMENTAL CONSULTING

RE: Learner Needs Assessment

ENVIRONMENTAL CONSULTING has contracted with Shelly Smith Moore at no cost to the organization to conduct a learner needs assessment as part of the requirement for her master's degree at the College of Education, Department of Adult and Continuing Education, Virginia Tech, Falls Church, Va.

During the next month, she will conduct a needs assessment of our organization utilizing a focus group discussion technique. This requires that she interview groups of four-five employees for approximately two hours each in order to gain a better understanding of our organizational needs. Each of you will receive assignments before the middle of September.

Although these meetings will be audiotaped, all audiotapes will remain in the possession of Ms. Moore and will not be



ENVIRONMENTAL CONSULTING values employee contributions and believes that they are the best resource to determine current and future training needs and address problems. shared with management. Individual responses will be kept strictly confidential; only summaries of recommendations will be shared with management.

I appreciate your contributions of time and ideas. For more information, please contact her at (703) 771-4183 or see me.

## FEEDBACK ON PROCESS

MEMORANDUM FOR PARTICIPANTS IN GROUP DISCUSSION

FROM: Shelly Smith Moore

Thank you for your openness in sharing your thoughts, observations and ideas with me. Please be assured that I will keep your responses anonymous and they will be included in overall recommendations. To enhance my skills as a moderator, I would appreciate any feedback you could give me from your experiences in the meeting by answering the questions that follow. If you do not wish to answer the questions now, you may fill this out tomorrow and I will pick up your responses later in the week. Thanks again.

What did you like you most about the meeting?

What did you like least about the meeting?

Responses included:

What did you like most about the meeting?

The pace and the openness

Give and take with the other engineers. Frank discussion without reprisal. Chance to make fun of Garry's clothes.

The meeting allowed me to openly discuss complaints and suggestions in an organized manner. It also gave me the opportunity to listen to other workers' complaints and suggestions.

People that do not say anything at other meetings had a chance to express their opinion.

It provided a means to let the directors know about possible problems. It also served as a good way to vent frustration. I also found out others felt the same as I did on a number of issues.

That we could speak freely with the input of our fellow employees.

I appreciate the chance to express my feelings and opinions without any potential conflicts or hard feelings. The meeting was well run, you were organized and kept the conversation moving. I look forward to the results of your study.

What did you like least?

Time constraints -- probably should start earlier so we don't go over normal hours.

Seemed strained due to presence of individual who is not widely accepted. Would have been good to include some vertical profiling.

I think that the problems should not be addressed on a broad base (as a whole company, or board of directors, etc.) but pointing out specific persons and problems and solutions. We have been addressing "direction," "business plans," etc, but nothing happens if tasks and plans do not have a specific person in charge.

Focused too much on negative aspects of the company. I thoroughly hope all this was not a waste (ie, the directors will pay attention and address our problems and fears).

Having the meeting taped. I'm pretty sure it won't come back to haunt us but stranger things have happened.

In the case of my group, it would have been better to have a few more people to allow more of a group discussion.

## EXECUTIVE SUMMARY & REPORT

Submitted February 5, 1993

### Purpose

The purpose of this needs assessment was to identify and assess learner needs by discussing organizational problems.

### Methods

In addition to four focus groups of staff level and middle management employees, two upper management directors were interviewed. This report includes majority and dissenting opinions that the participants expressed. Although the interview guide changed throughout the sessions, many of the issues discussed emerged without prompting from the moderator. In general, the questions included the following: What are the main external and internal problems that ENVIRONMENTAL CONSULTING is facing? Describe the task assignment process. How do people communicate? What skills do you believe people need to function better at ENVIRONMENTAL CONSULTING? What could ENVIRONMENTAL CONSULTING do better? What are its competitive advantages and disadvantages?

### Results

In both the focus groups and the management interviews, the loss of the LA Clarke site and current economic conditions were mentioned as external blocking factors to ENVIRONMENTAL CONSULTING' financial security.

In the upper management interviews, respondents emphasized internal employee problems such as a lack of employee innovation, inability of some to realize the "big picture" and cross disciplinary lines, employee resistance to marketing, lack of motivation to independently learn, low initiative and apparent confusion when approaching complex tasks.

In the focus groups, employees identified internal problems as follows: workplace learning; lack of business direction; inefficient use of resources/finances; marketing; management influence; organizational structure; communication; employee empowerment. Cultural assumptions included: employees need to learn on their own, scientists can't market or operate a business, and feelings should not be discussed in the workplace. Employees considered ENVIRONMENTAL CONSULTING' competitive strengths to be its diversity, commitment to ethics, client responsiveness, and innovation. Workplace strengths were its informal and harmonious environment, management generosity, and creative work force.

### **Recommendations**

The following learner needs emerged from the focus group discussions: 1) interpersonal and team leader skills, 2) marketing, 3) short-term project management, 4) long-term strategic planning and 5) continuing professional development. While ENVIRONMENTAL CONSULTING' mission is to solve complex environmental problems using a multidisciplinary approach, the current organizational structure and management approach appears to confine employees departmentally. In order to enhance this multidisciplinary approach, it may be beneficial to structure the organization into cross-functional work teams.

**RESULTS****WORKPLACE LEARNING****New employee orientation**

- \* No structured process in place to train employees ("sink or swim" and "seat-of-the-pants training").
- \* Seen as inefficient to seek out help on own.
- \* Employees with seniority felt they received ample guidance.
- \* Those hired later felt they were left to learn on their own and did not receive enough guidance.
- \* Because management wanted employees to be self-directing, some employees were reluctant to seek help.
- \* Some employees appeared to flounder with new tasks.
- \* Most management seen as helpful; some not.
- \* Written procedures would be helpful.
- \* Need for an updated employee locator.

**On-the-job learning**

- \* Management emphasizes new projects, which increases employee learning time and billing costs; because each project is new, there is no building of knowledge.
- \* A minority felt there were not enough new techniques learned.
- \* Perceive that there is more profitability in standardizing work and less in design work.

**Suggestions for improving on the job learning included:**

- \* Decrease management training burden by hiring staff with 5-6 years experience.
- \* Implement a mentoring system to help new employees learn.
- \* Hire consultants for specific training needs.
- \* Opportunities to grow and develop beyond their specialties.
- \* Need more opportunities to talk with experts.
- \* Offer opportunities to cross train and rotate jobs to:
  - Alleviate boredom by providing variety
  - Allow employees to replace each other as needed
  - Learn new skills
  - Keep individuals busy who were otherwise slow
  - Prevent confinement to their disciplines (although some did not feel "pigeon-holed")
  - Some believed they had opportunity to cross

specialize, while a minority did not.

- \* Develop structured procedures for new hires.

#### **Specific training needs:**

- \* Team building
- \* Communication skills
- \* Marketing
  - More opportunity to practice marketing (upper management now does most of the marketing)
  - Formal workshops or outside courses in sales/marketing
- \* Business management (financial planning, organizational skills, project management, long-term planning and accounting)
- \* Opportunities to meet with experts in their fields, take coursework/attend professional meetings
- \* Offer more in-house seminars
- \* **Opportunities to cross-specialize.**

#### **BUSINESS DIRECTION**

Employees do not perceive ENVIRONMENTAL CONSULTING as having a clearly defined direction or mission, with short-term objectives and milestones.

They attributed this lack of planning to:

- \* The company's rapid growth in a short time period
- \* Management lacking business skills because they were scientists
- \* Lack of commitment by some employees and management to the company's environmental mission
- \* Lack of commitment by management to innovation (some management did not consider innovative ideas from employees).

Employees wanted managers to develop a direction that:

- \* Included long-range plans
- \* Communicated better the mission/direction of the company
- \* Switched from an industry focus to including government contracts (a minority view)
- \* Emphasized quality.

#### **MANAGEMENT INFLUENCE**

##### **Project management**

- \* Employees wanted more management processes and procedures developed:

- Those that existed are not followed
- Development of processes/procedures usually undertaken by one individual who cannot influence others to follow the system
- Need to develop a fair work prioritization process
- Need to develop a clear lab billing process
- Need to develop company procedures and offer templates
- Need to pre-plan
- Need to set goals, check milestones and publish progress
- Consistent and clear directives.
- \* A need for one administrative person to track projects, hours and develop a paper trail.
- \* Current time sheet process time consuming and suggested that computers could decrease the time involved.
- \* A tendency to put off harder, more difficult tasks
- \* Some people overloaded with work.
- \* Deadlines missed because "one person dropped the ball," which impacted others' work.
- \* Different managers have different ideas of what an employee's duties are.
- \* Missed deadlines due to frequent schedule changes, lack of planning and processes.
- \* Charlottesville was perceived to be better organized.
- \* Minority felt there were sufficient established procedures available for site assessments.
- \* Need to institute a quality process.

#### **Financial planning**

- \* Employees questioned the financial practicality of doing everything in-house.
- \* Management not attune to the costs of projects.
- \* Management did not see the billable rates as a problem.
- \* Management tendency to overwork and overspend on small projects ("make a big deal out of little things").
- \* Upper management lacked business skills.

#### **Supervision/Feedback**

- \* Some felt management leads people along with empty promises.
- \* Some people were not held responsible and accountable.
- \* Employees appreciated relative freedom and responsibility in accomplishing their tasks.
- \* Employees expressed a need for a better balance between direction and independence.
- \* Some employees believe others need closer supervision.
- \* Employees should be more self-directed.
- \* Some managers were seen as "too nice" and "let things



fall through the cracks."

- \* Some employees wanted to work more with their supervisors.
- \* Those employees with seniority felt they received enough guidance.
- \* Newer employees felt they were on their own more.
- \* Upper management needs to delegate more responsibility.
- \* Many requested more frequent and specific feedback.
- \* Management not specific (Need to "read between the lines").
- \* Performance problems were not identified and communicated.
- \* Some middle managers felt some employees lacked basic skills needed to do their work.
- \* Some middle managers felt they were overburdened and had to redo employees' work.
- \* Employees felt everyone should be able to fill in for supervisors when they were absent.
- \* Review process differed according to the managers--some were too harsh while others did not provide feedback.
- \* Need a review process.
- \* Institute peer review.

### **Interpersonal approach**

- \* Perception that management protected management but laid off staff level.
- \* Management used their position to get their work priority.
- \* Some believed there was a punitive approach to mistakes.
- \* Some management did not understand what the line staff did.
- \* Majority felt that management cares about the employees.
- \* Some people take unfair advantage of management generosity.
- \* Some managers take things too personally.
- \* Staff level employees held ultimately responsible, not managers.
- \* Management is approachable.
- \* Most managers are patient and willing to help others learn.
- \* Some employees felt demoralized when management were not upset when people leave.
- \* Some management withdraw rather than facing the problems.
- \* Some management were not supportive of new ideas.
- \* Some employees believed their department heads did not represent their interests effectively.

### **ORGANIZATIONAL STRUCTURE**

The lack of structure was seen as having both positive and negative effects on employee productivity and morale. Some groups called for more structure while also mentioning they liked the degree of freedom allowed at ENVIRONMENTAL CONSULTING. They believed that ENVIRONMENTAL CONSULTING offered more learning opportunities and access to key employee resources than other more structured organizations. Problems attributed to the lack of organizational structure were as follows:

- \* Chain of command was unclear in practice.
- \* Confusion over who's in charge attributed to lack of structure.
- \* Conflicting viewpoints from management.
- \* Employees confused about specific job roles and priorities.
- \* High billable hours caused by a top heavy organization.
  - \* Need for more middle management and less upper management.
- \* No team approach to work problems.

- \* Departmental fragmentation.
- \* Some believed departmental fragmentation necessary for groups to be independent.
- \* Engineering was seen by employees outside that department as having more organizational structure and processes than other departments.
- \* Some people seemed overly set in their ways and resistant to change.
- \* Many management and staff employees approach projects from the "narrow view of each discipline" with "little integration".
- \* Some middle managers believed the company was well integrated and employees understood the "big picture".
- \* Some saw the small size of the company as a limiting factor in its competitiveness with other companies.
- \* Some saw the current billable system as unfair to certain departments and favoring the environmental group.

#### COMMUNICATION

Overwhelmingly, communication in ENVIRONMENTAL CONSULTING was considered poor, both intra- and interdepartmentally:

- \* Lack of follow through after meetings.
- \* Departments do not understand how other departments operate.
- \* Trend toward departmental segregation.
- \* Some employees do not know Charlottesville employees and their roles
- \* Some uncertain about what the lab did and its research capabilities.
- \* Closed-door management meetings foster rumor mongering.
- \* Not enough notification of layoffs.
- \* Many appear to not know what's going on or who does what.
- \* Director meetings need to be held.
- \* Some people don't want to/can't make the effort to communicate.
- \* Management was not explicit enough.
- \* Management expectations are unclear.
- \* Departmental segregation caused lack of communication.
- \* Newsletter considered unimportant by some.
- \* Duplication of effort.
- \* Some people procrastinate, and missed deadlines adversely affect others.
- \* People have to "pick up the ball" for others.
- \* Conflicting directives from different managers.

**Strategy options discussed:**

- \* Newsletter was a helpful mechanism for communication.
- \* Department heads should meet and communicate more.
- \* Management needs to communicate meeting results with others.
- \* More interface with Charlottesville.
- \* More interdepartmental seminars.
- \* More meetings with department heads to check problems, set goals, trouble shoot and get employee input.
- \* Need meetings to be followed by written work and plans.
- \* Some felt computer networking would help.
- \* Continue the seminars.
- \* More company-wide meetings, perhaps at lunch time.
- \* Need to check lab schedules.

**EMPLOYEE EMPOWERMENT/MORALE**

- \* Some males have a stereotypical image of women.
- \* Poor interpersonal fit of previous marketers.
- \* Absence of engineering on the Latin American marketing effort.
- \* Marketing needs to be an interdisciplinary team effort.
- \* Previous marketers kept on long past their usefulness.
- \* Unfairness.
- \* Several feel expendable, unimportant and left out.
- \* Some people seem to work harder than others.
- \* More management than non-management "goofing off."
- \* Perception that management believes staff level should not be concerned with the business.
- \* Current financial conditions caused job insecurity.
- \* Some departments were undermotivated, which affected others.
- \* Company does not care about the employee's best interests.
- \* Management does not appreciate non-technical employees.
- \* Job titles that are demeaning.
- \* Research scientists have more status.
- \* Some departments felt less important.
- \* People blamed unjustly.
- \* Some people are considered untrustworthy.
- \* In engineering, chemical engineers had more status.
- \* Some departments have to cover the costs of other departments.
- \* Priority given to management projects but not to staff.
- \* Demoralizing to have to do clerical and field work.
- \* Need to hold activities to bring people together.

**MARKETING**

- \* The lack of success of the previous marketers was frequently mentioned:
  - Lack of understanding of the business
  - Poor interpersonal fit
  - Not supervised
  - Unskilled
  - Not enough on-the-job training.
- \* A minority felt there was no real commitment to marketing.
- \* Marketing training:
  - Many expressed resistance to marketing
  - Marketers need to have technical knowledge

- Technical employees needed to go out and market in order to learn.
- \* Clients dismissed without any follow-up for more work.
- \* Need to present a better first image to clients.
- \* Many expressed appreciation for Eleanor's marketing efforts (with some feeling she needed to know more about the company).
- \* Lack of a clearly defined marketing strategy that included the whole company's services:
  - Each department marketed independently
  - Absence of engineering on South American marketing project was seen as excluding an important part of the company
  - No pre-planning for marketing strategies and protocol.
- \* Marketing resources
  - A need to determine resources available for marketing
  - A need for a marketing tracking system (using computer networking as a possible option).
- \* A perception that some individuals were marketing too much and not spending enough time on technical and production oriented tasks.
- \* Little time for upper management to develop marketing strategies.

## **RESOURCES/SUPPORT**

Some also believed there lacked financial direction or that the goals were unclear, and several employees believed the company needed more cash reserves.

### **Equipment Resources**

Problems with the use of equipment resources were as follows:

- \* Too much furniture and office space
- \* Too much money spent on computers (lab computer) and inefficient use of computers by not networking
- \* A history of extravagant spending without bargain shopping (asbestos equipment) that made it difficult to cut back during hard times
- \* Misuse of mobile phones and company trucks that benefitted the individual, not the company
- \* Need to eliminate unnecessary resources (drilling rig), and purge the warehouse
- \* Need to concentrate more on competitive pricing for supplies.

**Research Support**

Some of the problems discussed concerning the purpose of the R&D department included:

- \* Research benefitted the individual and not the company.
- \* A perception that it was unprofitable and difficult to support
- \* Unclear and uncommunicated purpose and goals of R&D
- \* A need to invest in lab to increase capabilities and services
- \* A perception that the company tried to sell unproven technology without hard empirical data.

**Support personnel**

- \* Removal of the receptionist was considered a key loss.
- \* Technical employees need to be trained in support functions.
- \* Replacement needs to understand the business.

**Salaries**

- \* Inequitable and disproportional pay.
- \* Salaries leaked out.
- \* A perception that salary increases went to those more aggressive in seeking compensation (squeaky wheel).
- \* They believed that there should have been no exceptions to the cost of living increases.
- \* Billable rates were too high (too many management).
- \* One group felt each department should be accountable for its profitability.
- \* Some feel they're carrying others' salaries.

## ADVANTAGES

### Competitive advantages included:

- \* Multidisciplinary concept of ENVIRONMENTAL CONSULTING
- \* Its leaders ("very sharp")
- \* Offers diverse services
- \* Highly client responsive
- \* "We can do it all"
- \* Well qualified in a variety of areas
- \* Ability to match client needs
- \* High quality field employees
- \* Meetings to solve client problems
- \* Commitment to ethics and values to serve the client
- \* Does not mislead customers
- \* Focus on the private sector avoids conflict of interest and bureaucratic paper trail
- \* Emphasis on innovation, particularly to reduce client costs (citing the incineration methods, and improving the analysis process).
- \* Ability to customize for the customer's needs.

### Workplace environment advantages included:

- \* Informal, flexible working environment
- \* Most see management as accessible and receptive to questions
- \* Enjoyed management supervision style where someone "was not looking over your shoulder all the time, "although some management was seen as doing just that).
- \* A variety of different specialists available for help
- \* Harmonious environment
- \* Great degree of freedom
- \* Good benefits
- \* Company is employee oriented, but some people took advantage of its opportunities
- \* Its leader is very generous
- \* A creative group with great potential
- \* Employees did what needed to be done regardless of their position in the company.

## CULTURAL ASSUMPTIONS

Assumptions that emerged included: it's better to learn by yourself than to ask for help, feelings should not be discussed in the work place, scientists can't market and scientists can't operate a business successfully.



## RECOMMENDATIONS

Five learner needs emerged from the focus group discussions: 1) interpersonal and team leader skills, 2) marketing, 3) short-term project management, 4) long-term strategic planning and 5) continuing professional development.

**1) Interpersonal and team leader skills:** Training in team leadership skills might address many of the problems mentioned in the categories of Communication, Management Influence, Organizational Structure and Employee Empowerment/Morale. Management at ENVIRONMENTAL CONSULTING have access to communication networks and provide a linking function between departments that staff employees do not. They understand the "big picture" simply because they know what's going on elsewhere in the company.

Team management style differs from the traditional hierarchical management style. Managers of teams operate as a supporting resource to group members, help draw out those who are reluctant to discuss their ideas and control dominating influences.

Team leadership ability can significantly affect the quality of team meetings and their output.

Training in team building and leadership skills for management (as well as staff level employees) has been demonstrated to provide managers with the skills to develop a supportive team environment that includes employees in a decision making process. By doing so, employees may feel responsible to the group and empowered to take risks, exchange innovative ideas, develop their own leadership abilities, enhance their understanding of the organization as a whole rather than departmentally through informal communication networks, and understand each other's roles.

Some specific examples of problems identified by employees that may be addressed by team leadership and interpersonal skills training include:

\*Communication -- "people dropping the ball and others having to pick it up," not understanding the whole concept of a project, confusion over job roles and responsibilities, people uncomfortable about seeking help, conflicting and unclear directives, and people floundering over new projects.

\*Empowerment -- feelings of unimportance and being excluded, some departments and some people have more status, a sense of unfairness, particularly in regard to work priorities and salaries.

\*Organizational Structure -- Some interdepartmental competition, departmental fragmentation, and confusion over priorities and responsibilities.

\*Management Influence -- lack of planning and process, missed deadlines, different directives from different managers, unclear communication, inattention to quality, and not enough feedback, guidance, and support for innovative ideas from staff.

**2) Marketing skills:** A need for either hiring outside technical marketers or training existing employees was identified in the group discussions. There was some discomfort and resistance expressed to technical employees marketing. Three possible options: A. Hire outside consultants: Sales and marketing training companies can produce customized workshops that meet your specific needs. They can in-house train employees in communication and questioning skills, developing prospects and leads, planning marketing strategies and provide practice opportunities.

B. Develop a mentoring process: Those experienced in negotiating with clients could guide staff level employees in hands-on learning experiences.

C. Hold team marketing meetings: These meetings could focus on developing marketing plans, strategies and leads. These meetings might produce a wide variety of ideas from which to draw and reduce discomfort for some of the less experienced employees who could learn from those more experienced.

**3) Short-term project management:** Employees expressed a need for developing project management processes in the company. There are several computer software packages available and employees could develop such processes in house. A related problem was that of non-compliance with and commitment to existing procedures and processes and lack of management proactivity. These are discussed in the Results Section under Management Influence and Organizational Structure in which employees mention missed deadlines, lack of a prioritization process, frequent last minute schedule changes, lack of attention to quality, and inattention to checking work progress.

**4) Long-term strategic planning:** A need for developing a long-term vision for the company and communicating that vision to employees was expressed. There are books and management consultants who can help you develop strategic management plans which address organizational needs, resources, goals, and the mission of a company. Communicating such plans with milestones to employees can help motivate and provide a sense

of direction and purpose. While ENVIRONMENTAL CONSULTING has developed a mission statement and long-term business plan, it may be helpful for this plan to be reconsidered with short-term goals and milestones developed and then communicated to employees. Team planning meetings with both management and staff employees might enhance employee commitment and understanding of the company's mission.

**5) Professional development:** While employees understood the current financial conditions required decreasing formal outside continuing education, some in-house opportunities could be offered:

- \* In-house seminars
- \* Lunch-time talks
- \* Meetings with experts
- \* More interface with in-house specialists

### **Organizational Structure**

Some companies are choosing to solve their morale, communication and workplace learning problems by leaving the traditional hierarchical approach to management and adopting a team approach.

While ENVIRONMENTAL CONSULTING' diversity is considered its major competitive advantage, employees appear to be segregated by departmental function. Organizing cross-functional teams may increase employee awareness and understanding of an organization's purpose as well as others' roles and responsibilities. This approach might be highly applicable to a multidisciplinary environmental company.

Cross-functional teams would theoretically result in:

- \* Enhanced communication by allowing employees to develop their own informal networks of communication
- \* Opportunities to cross-specialize
- \* Decrease resistance to new policies
- \* Innovative and creative thinking by brainstorming and problem solving, which emphasizes research throughout the company
- \* Lighten management training burden
- \* A supportive rather than competitive environment
- \* Independent and self-directing employees
- \* Decreased confusion and missed deadlines
- \* Decreased time since employees would know who does what
- \* Enhanced quality by providing opportunities for feedback and review from the start through the finish of a project.

A particular example might be the current resistance to marketing. By composing cross-functional work teams of environmental and research scientists, lab chemists, engineers and business administration, employees might emerge from meetings with new, innovative leads, as well as draw support and learn marketing techniques from one another. Casting a wide net of ideas might be better than focusing on the ideas of one individual.

### **Rewards**

In addition to restructuring the organization and training employees, management might consider rewarding group work as well as individual achievements. In team management, supporting as well as leading roles are compensated. Traditionally, individual achievement is emphasized over the whole, which can foster competition rather than cooperation. Specific examples from the Employee Empowerment section include: some departments and people had more status than others, salaries were unfair, some departments had to carry others and employees' interests were not effectively represented by department heads.

## POST-STUDY FORCE FIELD ANALYSIS

### THE EXTERNAL ENVIRONMENT

#### Opportunities

State and federal government slow to respond to environmental threats to public

Increase of pollutants in water supply

Most competitors highly specialized in one area

New administration may increase industry support for clean-ups in U.S.

Increase in foreclosures, in which banks held responsible for clean-up

Increased political pressure to decrease chemical contaminants in landfills

Heightened public awareness

Stiffer state and federal regulations and fines

Small farmers increasingly selling to large farmers, requiring environmental assessments to transfer deeds

Local public interest grass movements calling for cleaning up environment and solving public health problems

Competitors focusing on small businesses and state and federal agencies for funding

Higher cost of larger competitors to solve

environmental problems

Landfill space available is decreasing, calling for new methods to dispose of contaminated soil

Increase in academic programs focused on environmental sciences

Sen. Robb's office committed to helping local industry thrive

#### Threats

Decrease in development

Not well known in field

Image may be tarnished from recent conflict with EPA

Current small size may limit growth and recognition

Untrained field employees

College graduates highly specialized without understanding of whole picture

High cost of technology not available for everyone

Lack of collaboration among public agencies and between public and private sector, puts environmental consulting firms in the middle

Increase of smaller competitors entering the field, competitively out pricing ENVIRONMENTAL CONSULTING in smaller business field

Attitude that businesses are

the bad guys

State recession

Liability increases cost to environmental businesses and consumers

Huge federal deficit may decrease funding

Most businesses rewarded only for short-term fixes

History of industry not being environmentally responsible

Lack of cooperation between EPA and industry

Funding for long-term projects mostly from the government; conflict with corporate mission

State recession has slowed growth in construction and development industries

Anti-industry sentiment politically popular

#### **INTERNAL ENVIRONMENT**

Facilitating Forces

Diverse specializations

Ethical

Client customized work

R&D to develop new technology and reduce costs

Lab to decrease costs to clients of contracting outside work (although some still needs to be sent out)

Addition of engineers increases company's offerings

Close relationship with Sen. Robb's office

Management experience with client negotiation

Development of new on-site incineration method that eliminates need to transport contaminated soil to a dump

Informal work environment

Qualified employees

Commitment to ethics

Client responsiveness

Emphasis on innovation

Ability to match variety of client needs to diverse services offered

Does not mislead clients

Management accessible

Good benefits

Employees willing to pitch in when needed

#### **Blocking factors**

Too many upper management driving up costs

Employees not communicating well with one another

No clear marketing strategy

Many employees inexperienced in client negotiation/marketing

Corporate mission to focus on industry needs eliminates publicly-funded jobs (the majority of consulting work)

No large contracts in hand

Closed-door management meetings; employees excluded

No quality process (feedback loop) within company or with external clients

Competition for resources among departments

No long-term plans

Clients not followed-up for more work

Lack of attention to marketing: resources, strategy and training

South American marketing unprofitable (\$65,000 marketing investment for \$75,000 job, not including work & analysis)

Poor intra-departmental communication

Segmented by departments; defined by specialties

Slow learning curve due to only new projects

No management guided training

Only management understand whole company

Employees do not understand purpose of R&D

Lab running at a loss; disorganized

Missed deadlines

No cross-training

Little attention to quality; just meeting deadlines

Tendency to put off harder tasks

No performance review process  
Some overworked; others not enough

Management use position to get their work priority status

Chain of command unclear

Lack of follow-through of plans

**EXTERNAL CLIENTS**

State Department of Environmental Quality

EPA

Community (grass roots) association (Piedmont Community Association)

American public (taxpayers)

State government

Banks

Gas stations

Farms

Construction and development firms

Other industries (chemical, manufacturing, etc.)

Professional associations (Professional Soil Scientists of America, Groundwater Society of America)

Academic: University of Virginia, Virginia Tech, others

County Department of Health

County Fire Marshall's Office

Laboratory equipment supplier

**INTERNAL CLIENTS**

Research and Development

Laboratory Services

Engineering Services

Environmental Services

Field Support

Administrative Support

Marketing



## RESEARCHER OBSERVATIONS

(Researcher observations: Made during and shortly after moderating focus groups.)

Disclosure and trust -- Participants who appeared to trust each other the most were those in the laterally heterogeneous but vertically homogeneous group. In the homogeneous group of engineers, three of the members expressed concerns to the researcher prior to the meeting about one of the members discussing the meeting with their department head. In the groups which were vertically heterogeneous, management appeared to dominate the discussion. Particularly in the laterally homogeneous group of chemists who also were vertically heterogeneous, one of the group members approached the researcher after the meeting to say that it would have been better if management (particularly one management group member) had not been present. She did not feel free to discuss issues she felt were important.

The laterally heterogeneous and vertically homogeneous group did not express concerns about trust issues and quickly began discussing issues relevant to the meeting. I would speculate that composing groups of departmentally different members might actually enhance trust issues in focus groups because they may not have been as concerned that other members

might report the group's discussion to their supervisors. Another issue of trust was discussing the group meeting with others before their meeting. I asked that group members keep the meetings confidential. Because the engineers kept the meeting confidential, the others seemed too do the same. One of the members of the laterally diverse and vertically homogeneous group shared with me that he asked other members what occurred and they said they would not share that information. He would have to attend to find out. They also might have heightened their feelings of trust with one another.

Quality of expression -- In the two groups that had management participation, the management appeared to dominate the group discussions by bringing up issues and talking the most. The laterally diverse but vertically homogeneous group had a greater variety of ideas, most members contributed, spoke to a learning process, built upon each other's ideas and more willingly offered conflicting viewpoints and perspectives on issues. They seemed to experience more rapidly the norming, storming and performing phases of a work group; in short, the meeting was charged, exciting and dynamic.

Quality of results -- While the vertically and laterally homogeneous group provided depth and detail, the laterally heterogeneous and vertically homogeneous group provided a snapshot of the entire organization and how the different

functions interrelated. People learned that problems that impacted their jobs also did others, and noted that they were learning from each other during the meeting. In this type of group, it would appear natural for people to begin moving toward awareness, appreciation and understanding of each other and how they are interdependent. Because one of the goals of the research (from the organization's perspective) was to gain a better understanding of the organization as a whole, this group provided the richest insight into how the entire company operated. The mid-level managers who participated also seemed to have a better understanding of the entire company, probably because they met together and acted as a link with other departments in the organization. However, it appeared non-management employees were able to do the same once they had access to one another, and shared opinions and experiences with one another freely, without management present.

All the groups seemed to experience (particularly the homogeneous group of engineers and the vertically heterogeneous but laterally homogeneous group of chemists) periods of hopelessness about the future of the company, which bears out the findings of Lewin (1951), who said that in meetings that focused on problems participants would become more withdrawn, speak lower and be less active. I believe that if the focus groups had focused more on the future, that they might have been more dynamic, engaging and would produce

better results. The laterally diverse and vertically heterogeneous group seemed to be more energetic than the other three groups and naturally seemed to gravitate toward issues that concerned the future direction of the company.

Other extraneous variables -- The company began downsizing in earnest toward the end of the last focus group, which might have affected the quality of the meeting. Two marketers had been laid off before the first focus group meeting of engineers. Before the last meeting, an engineer in the Northern Virginia office and two staff in the branch office also were laid off.

In the last group meeting, the researcher is married to the supervisor of the one of the managers present. This last group, with the lowest quality of results, was composed of people who seemed to be naturally introverted, which may have affected the quality of the meeting.

Also, this is a small company. If you were to design mixed management and non-management groups in a large company, you may have better results. In a larger company, it would be easier to be isolated departmentally, so that if a lab chemist was in a group meeting with an accounting manager, the chemist might perceive the accounting manager's influence or power over him as minimal, whereas management in this company knew all the players and had access to the President.

## CRITIQUE OF PROCESS

Although this focus group study provided a wealth of information on this organization, management did not appear to address the issues identified by developing action plans. It is possible that the results were not used for the following reasons.

\* The company's immediate survival needs was the focus of upper management's attention.

\* Because upper management were interviewed separately and not as a group, they did not buy into the process, bearing out the observations of Beckhard & Pritchard (1992) and Weisbord (1991) that a bottoms-up change effort does not work.

\* The director of environmental sciences, who was the husband of the researcher, left shortly before the results were presented to work for a competitor.

\* The president appeared to be in Denial, while employees appeared to be in Confusion, and ready for change.

Contentment ("I like it the way it is")	Renewal ("We have too many good ideas.")
Denial ("Me worry?")	Confusion ("What a mess. Help!")

Figure 5. Claes Janssen's Four Room Diagnosis (from Weisbord, 1991)

\* The findings did not support the President's theories about morale and structure in the company. While Mr. Sanders hypothesized that engineers, by virtue of their discipline and training, were too analytical to understand complex environmental problems (or get the "big picture"), the data indicated that they were segregated from the rest of the company. Certainly by departmentalizing the engineers and keeping them from meetings and marketing ventures, they did not have access to the kind of information that would enhance their understanding of the company and client's needs.

In addition, the President described the company structure as both hierarchical and matrix. Following the results of the focus group study, it was determined that the company operated more by departmental and vertical affiliation than by client-driven work teams. The chemists appeared to be the employees who were shared. Engineering, Environmental Sciences, Field Support, Marketing, and Administration operated as separate departments. If a manager in environmental sciences needed a research chemist to work on a project, he would first ask permission from their manager and then give them their portion of the work. The chemist would not meet with other employees working on the project.

Weisbord (1987) believes there are two main reasons for the "report-in-the-drawer" phenomena.

- 1) Some managers want reports but do not necessarily want

to implement them or understand how to do so. He speculates that some may do so to satisfy a boss.

2) Some managers need to act, so they turn the problem over to an expert, thereby taking the client off the hook

3) They don't see how they can implement the recommendations.

## SAMPLE ANALYSIS OF GROUP B

Laterally heterogeneous and vertically homogeneous

### Quality of idea generation

While Group A was almost linear in its approach to group discussion, Group B demonstrated a more random and diverse exchange of ideas, even early during the group meeting. Members built upon each other's ideas by expressing differences of opinions. In response to the first question, three separate ideas were offered as possible problems that the company was facing.

Even early during the meeting, the following needs for change were generated: replacement of the current large contract, generating more clients and becoming less one client dependent, needing business direction, better cash flow and financial management, better use of physical resources, need for supervision and on-the-job training. In addition, this group began early to present the context of both its internal and external environment when discussing the economy. They also emphasized the need for learning on the job, which was one of the main purposes of the study.

Helen: We grew way too fast.

Jerry: Yea we grew way too fast, which is not uncommon in this business, especially in this company, it was one of the typical boom businesses in the 80s. The economy was taking off and this company went right with it.

This meeting was less moderator-directed in terms of



identifying issues to be discussed than the homogeneous group of engineers. The moderator concentrated on clarification of responses and ensuring participation from all members.

#### Trust and Openness

Group B discussed interpersonal issues and shared personal feelings about their work in this organization. One of the group members, however, participated very little during the group meeting, although she did begin participating more late in the meeting. By nature, though, she was a highly introverted person and also she had just given notice that she was leaving the company. This might also have influenced her commitment to the group process.

Overall, the group members appeared to trust each other enough to reveal personal feelings to one another. A possible reason for their high degree of trust may have been that they were the third group interviewed and trusted the moderator and other group members not to reveal confidences. They shared, in the last third of the meeting, that former group members did not reveal their group meeting discussions with others in the company, which probably enhanced their trust of the group process. This later led to a discussion on how the results were going to be used, which is discussed in the section on mourning.

Jerry: That's like the master's level people asking how this meeting was and I said it's not over yet and I can't talk about it.

Group laughter

That's right.

Moderator: Good, thanks. I told all the other groups, that's a very key issue, because if one of them starts talking about what other people said, by the time I do the fourth meeting, I

Jerry: Well this person is going to be in one of the meetings.

Moderator: Well I guess it's natural curiosity.

Helen: Well I haven't heard one thing.

Moderator: Well great.

Jerry: I haven't heard one thing.

Moderator: Oh great, because that's a real key point.

Helen: I haven't heard one thing about how these meetings go, the questions that were asked or what was said.

Jerry: I know that Kyle is going to question me when I get back to the job because he's the next one.

Moderator: You might be able to say how comfortable you felt about it or something.

Helen: Yea, that's all I heard is that once the meeting got started I was comfortable with it, that's all I heard.

### Group Developmental Stages

This group appeared to form, storm and norm earlier than Group A, which was laterally and vertically homogeneous. Consequently, solutions to problems the company was facing appeared to be both more abundant and diverse. This cycle of form, storm, norm and perform occurred frequently throughout the group meeting.

### Forming

The group members did not spend time clarifying the task or asking about the purpose of the meeting. They appeared less dependent on the moderator for information or to clarify the task than Group A. In addition, the members did not defer to anyone member to answer for them, as they did in Group A. However, it is also important to add that they were the third group interviewed during the study, so that they may have been better prepared than the first two groups interviewed, although there was at least one occasion on which clarification was an issue.

Jerry: Jerry: Well you're right. I want to be honest with you, I'm a little bit unsure about some things.

Mark: About your work?

Jerry: About giving names.

Helen: Oh.

Jerry: Actually for ENVIRONMENTAL CONSULTING' benefit, I think one of the biggest problems here is that people are hired to do a job and then are not supervised.

As the meeting progressed, members freely offered names. They were mostly concerned with how the data was going to be presented, which they discussed during the mourning phase at the end of the meeting.

### Storming

Storming phases during this group discussion tended to be

less frequent but lasted longer and involved at least three of the group members, while in Group A they tended to involve just two of the members in a competition for leadership. Two of the group members competed for leadership and tended to participate the most (Helen and Jerry). Mark, the chemist, was actively involved while the marketing assistant remained quiet during most of the meeting and did not contribute much to the discussion until nearly the end of the meeting. Early in the meeting:

Helen: This office is too huge. Everyone has their own office with a window. We have equipment coming out of our ears. Every person has a computer. Some people don't need a computer; they could share. No one shares.

Jerry: I don't know anything about computers. My daughter knows more about computers than I know. Laughter.

Helen: Look at this conference table. Look at these chairs. Is this really necessary? We have no clients to sit at this table.

Jerry: You have to have an image to present though.

Helen: Well look at the way we're dressed.

In the following example Jerry attributes the problems he's having in the field with the lack of discipline in the company, while Helen attributes the problems to poor morale and appears to identify with the field workers.

Jerry: A couple of my complaints about people I was involved with who are no longer here is that just basically that I'm having disciplinary problems with the guys on site because they guys know they're going to be leaving. It's like, "Who cares if we do anything or not. What are you going to do, fire me?"

Helen: But can you say you really blame them though? I mean it's not like...

Jerry:(Interrupted) I mean I've got plenty for them to do.

Helen: Oh no, I'm not talking about you. I'm just saying that if I was one of those guys I'd feel that way too. To me, they've been given no reason to be motivated.

Storming also involved different people throughout the discussion. In the following example, three of the group members agree with one another while the fourth still disagrees over field worker morale.

Jerry: Up to yesterday afternoon, I thought I was going to be laid off.

Helen: Nobody knows what's going to happen because they won't tell anybody. Nobody knows.

Jerry: You don't know whether you're going to stay or go.

Mark: But that's not uncommon. I was at another company where people were being laid off. Their attitude was that they didn't owe anybody anything. You have a job to do, while you're working here with them, and that's up to them how they want to treat you.

Moderator: You think that's here as well?

Helen: (Interrupted) Are you saying that's how it should be?

Mark: I'm not saying that's how it should be, I'm saying that's the way it is.

Later.

Jerry: I think there's job insecurity. One of my biggest fears is that my paycheck won't be coming.

Helen: And that's one of the biggest things with motivation. I'm going to look out for myself because I don't feel that I'm going to have a job in January 1. I'm going to look out for myself because I'm the one who has to pay the rent and put food in my mouth.

Mark: That's fine. Look for another job. But while you're on

the company payroll...

Lois: Right. While you're here, working for this company, put in your, yeah.

Norming

There were many instances of cohesiveness and full participation from all members, in which they shared personal feelings, theories about the company and empathized with one another.

Jerry: Larry has a bad habit of casually taking an interest in something, when he really means for you to do this. It took me a long time to that casual interest in something when he really means for you to do this.

Helen: Can anyone do the mind reading trick yet?

Jerry: Everyone laughs. That's a good one. Yea I'd love to know.  
And later.

Mark: I think a lot of people are getting bothered with this little trivial stuff that they shouldn't be bothered with because we got rid of our receptionist who did all these jobs. They got rid of Karen, who I think was the least, they should not have gotten rid of her. (Applause from Helen).

Helen: Somebody agrees.

Moderator: And now you have to

Mark: Now we have to do those little tasks, things that we had taken for granted.

Moderator: And now you have to learn how to do those things?

Mark: I have to fill out a requisition form, get it signed, get it filled by Helen, take the order, all that stuff that Karen used to do.

Moderator: So you believe it's inefficient.

Mark: Yes, very inefficient.

Helen: Yea, I do not think that Karen should have been let go, not only because I liked her personally, but she did a lot of things for people who didn't see it and didn't realize it.

Mark: That's good for somebody in her position because she does all the things that no one notices.

Helen: And she really didn't mind, I mean sometimes she complained about it but

Jerry: She used to help me and I can say I really enjoyed her because she really liked to help. She really took care of you.

Helen: I tried getting her back too, because now that Lois's leaving that leaves me, and she's only part time.

After indicating that he was impatient with the discussion of Lois and Helen's frustration at being perceived as secretaries rather than professionals, Mark indicates he is sympathetic to their position. He begins to express appreciation for Helen's skills and acknowledges her contributions to the company.

Helen: It's insulting, I think. It's like you're a little peon.

Moderator: What you're all saying then, is there are jobs different from a research scientist, there are degrees in between?

Mark: I can't really say, exactly.

Moderator: You have a chemistry degree right?

Helen: Yea, when you say chemist I am off because I am chemistry stupid. But when someone says this is our receptionist who answers the phone.

Mark: Yea, you do office management, accounting and it's difficult. I dropped accounting and statistics in college. Maybe that's why. Judging on our directors, our managers, I believe that generally scientists are not good managers or vice versa.

In the following example, storming produces a variety of opinions and theories, which is followed by forming.

Moderator: We've discussed some of the things that you think are helpful at ENVIRONMENTAL CONSULTING, specifically what are some of the things that are unhelpful?

Jerry: Lack of communication. Basically I feel like I'm left out in left field, and they forget about me. One of my adjectives is out of site, out of mind.

Helen: Too many managers.

Mark: I think we have the managers, but the positions underneath need to be filled until the company starts growing the way it needs to.

Jerry: Well this company is virtually set up for loose control for everybody. And then Larry decided let's dabble with this and do D&D instead of subcontracting it out, let's buy a drill rig so we don't have to contract it, and we saw all this profit being given away.

Helen: Well if someone is billing out at \$100 an hour, instead of someone

Mark: The billable rates are another problem.

Helen: We have Beth as a field technician and have Robert, Mike and Audrey supervising her. What's wrong with this picture?...It's backwards, there should be lower level people and one manager.

Jerry: That's why they shouldn't have gotten rid of Kenny Bradley, because his billable rate was down where you could show a profit.

Helen: We've got too many managers.

Jerry: Yea, poor Tim, I feel sorry for him.

And when discussing rumor mongering in the company:

Lois: Communication here is so poor that you begin to depend on the rumors, that's the only way you find out stuff.

Helen: That's why I was telling Larry about the rumors so he



could straighten it all out.

Jerry: Communication is so poor that we had to depend on rumors.

Mark: Rumors are going to fly no matter what, whether you are in a company or in a family or

Helen: But he doesn't want me to, he gets so angry.

Mark: It's the nature of human beings to gossip.

Helen: I had him got really angry at me (SIC) about these rumors. That's how much the man hates rumors.

Mark: They happen though. You can bet on it.

Lois: Yea they tend to happen but we don't get him to answer them.

Helen: I know that's why I try to get him

Jerry: I know that the first thing on the phone, I had to get copies for a few things, and asked if they heard anything good lately because that's the only communication we have out in the field.

And later

Moderator: How often do you all meet and have company meetings?

Helen: Very rarely.

Jerry: This is the first one I've had since last spring.

Mark: Yea, we have crisis management.

Group laughter

Jerry: I'm usually left out of a lot of the meetings.

Lois: Be grateful and a lot of those are at the last minute too.

Helen: Yea, they'll be planned right as you are going out to lunch.

And on cross training:

Moderator: What specifically do you see the skills that would benefit employees here for training.

Helen: I think that like Mike was saying earlier, there needs to be more cross training to keep people from getting bored with what they're doing.

Mark: It would also help give you a better view of the company as a whole.

Helen: Yea.

Mark: Mike knows about the things that go wrong out in the field,. You would get a better perspective.

Lois: Want to work with me? You'd appreciate how long it takes for me to do things for people here.  
And on marketing:

Jerry: We all make mistakes, but it was quite evident that he could not do the job (talking about the previous marketer). And why didn't Larry get rid of him?

Helen: Because he felt sorry for him. But anyway, what I was saying about Eleanor, I think the way we have her is a great idea.

Mark: I do too.

Helen: She's on commission. We pay for her expenses if she travels, we pay for her mileage and stuff like that, but being purely commission I think is good. What I think would be even more helpful if she was an environmental marketer, if she knew more about the environmental field (Eleanor works mainly for engineering).

Lois: But even without knowing that, she is doing more than a lot of the rest do.

In the most dramatic example of exposing personal feelings, Jerry and Helen begin discussing interpersonal dynamics between each other. As they discuss these issues, the other group members also participate.

Jerry: Well while we're problem solving here, we clash.

Helen: Who you and me?

Jerry: Right.

Helen: Well we're both very strong personalities.

Jerry: Because you know, we've clashed, but we have had clashes.

Helen: I've clashed with almost everyone in this company.

Group laughter.

Jerry: But that's the last thing I want to do, clash with anyone.

Helen: Well don't take it personally, you're not alone, I clash with Lois and Mike I'm sure.

Moderator: So there are some interpersonal conflicts here?

Lois: This is scary.

Mark: Yea, I've clashed before.

Jerry: I think that occasionally we do, but I don't think it's a big problem here.

Mark: I think it's a problem if it affects the work. I personally haven't seen that many confrontations but I would think that if somebody would say that well I don't want to work on this project because this person is working on it, then it's a problem.

Mike B: I have asked that if they want to give me a helper and it's a certain person that I don't want to do it, but if you want that person to work with me I'll do it.

Helen: I'll work with anybody regardless of how I feel about you.

Jerry: Well that's just it, it's professionalism

Moderator: So you have to repress your feelings about someone?

Helen: Oh I bite my tongue all day long (laughter).

Lois: Well I think when you enter a nice, relaxed, casual atmosphere you take a lot for granted and you get to know

people more on a personal level than if you were in a more structured, IBM place, you would never be...(trails off)

Moderator: Able to make those personal contacts?

Lois: Yea, so you wouldn't have those little petty little arguments.

Performing

Solutions to problems were offered by most of the members in the first quarter of the meeting, without one dominating as was the case with Group A. In addition, this group was able to identify positive attributes about the company when asked "What are ENVIRONMENTAL CONSULTING' competitive advantages?", although they did quickly move back into a problem identification mode of discussion.

Moderator: Well let's talk about some of ENVIRONMENTAL CONSULTING' competitive advantages, what it does well.

Helen: I think all the different services we have, getting one company to do the engineering, do the drilling, the in-house lab, I think that's a real plus, I think it would be a lot easier for a client because they wouldn't have to worry about what contractor we've hired, and how they go about getting answers to their questions or whatever.

TAPE STOPPED

Moderator: Lois?

Lois: Well yea.

Mark: We have diversely scientific people, who can jump from one area to another, with the engineers, the microbiologists all the way over the geologists and hydrogeologists.

Jerry: We're also a very well publicized company.

Mark: Because with the integration, we were talking about.

Helen: You can find aa personality for every client.

Mark: Or you can find someone who knows something about it. If the client calls and says they have this problem, somebody in the company will know or be able to talk to them about it, which is a major plus. I think another good aspect is that groups get together and brainstorm a problem.

Moderator: Does that happen a lot?

Mark: I see it once in a while.

Jerry: Just once in the last three months.

Mark: The heads got together.

Jerry: The heads got together, but not the departments. It's a real problem. Later

Moderator: Anything else you wanted to add about the company?

Mark: I think the upper level managers and board of directors are far more accessible than at other companies. Some companies you couldn't touch the board of directors or the president with a 10-foot pole.

Helen: It kind of makes you feel real good when you are talking with the president of a company about a problem that you have.

Moderator: That leads to our next issue if no one has anything else to add, and that is what is helpful to you...

Mark: I like the loose supervision, someone not looking over your shoulder, breathing down your neck.

Helen: Lois and I haven't had the chance to think because we had until recently someone breathing down our neck. And we try and change the way we do things. So I really haven't experienced doing things on my own yet.

Moderator: So you do feel like people do...

Helen: Well he's gone now.

Later

Moderator: What are some of the resources that are helpful to you, how about communication?

Mark: If you need to talk to someone about a problem, or a

question, there's always someone to talk to.

Helen: There are a lot of people here I think are really eager to teach you what they know if you ask. I don't think they would look down upon you like you were stupid if you don't know the answer. I think that's helpful to me.

Jerry: I think sometimes some people make me feel bad because I don't know about the computer.

Moderator: So some may make you feel incompetent but most people don't?

Helen: Here no, I never felt that way here.

Jerry: Basically, personnel, over all are great.

Lois: Yea.

Another example of performing was during the discussion of marketing needs in the company. Each member contributed to the discussion about what was need to fill this void. In the following example, you will see that Lois, who was quiet during most of the meeting, contributed significantly to the discussion and offered possible solutions to the problem.

Mark: I think you're right (to Helen). I think everybody needs to do a little bit of marketing, in the sense that say you're out somewhere and you bump into somebody and they say what do you do?

Helen: Yea, give them your card, if you need me to do something.

Mark: Yea, call me next time you're free and give them to the right person instead of everybody here making cold calls.

Jerry: Yea, I don't think we need to be making cold calls.

Helen: I wouldn't know how. When I had to do that before I was like uh and this guy wanted to go into details with me about analyses and I went uh, I don't know and I felt like an idiot.

Mark: I feel like I can talk about the company a little bit to get the ball rolling, but

Helen: I could get the ball rolling, I felt I was doing just fine until he threw back at me some really serious questions.

And later

Mark: I just don't think you can force people to be marketers.

Helen: No you can't.

Mark: Helen is right. It's a personality, an approach

Lois: It's a skill, like everybody else's.

Mark: It's like I couldn't sit down and do accounting.

Lois: It's something, you 're trained in it and also you have a certain type of personality, like you know left-brained, right-brained. It's something you're good at. And marketing is a skill like that, and maybe they don't want to acknowledge that, like we were saying before, certain aspects or procedures are considered more important or whatever, but they need somebody who is good at that and so that then can get a good idea of what they're selling.

Jerry: You need to find someone. Like Eleanor is great, but she lacks the knowledge. It seems impossible to find someone who has the knowledge, that has the salesman personality and the ego to go get it.

Lois: I agree, especially in this field, there's lots of great people who are out of work right now.

Jerry: Well there are a lot of good salesmen out there but they know anything about environmental work, you have to train them.

Mark: That's not an uncommon problem unique to ENVIRONMENTAL CONSULTING. I've seen it at other places I've worked. You cannot get good environmental places people. It's an industry wide problem. And also getting back to the marketing. It's the difference between extroversion and introversion. It's your personality.

Helen: You can't learn marketing, I don't think.

Mark: Yea, you find your little niche you like what you're

doing and you do it. I like doing the lab work and I would hate being a marketer. I would just hate it.

Helen: I would hate it too.

Jerry: I like being outside.

Mark: Everybody has their own little things....

Jerry: I can't market but we might be able to pick up a few odd jobs on the side to cover the overhead of the drilling, but that's it.

Mark: That's where you have to bring in someone like Tim or Mark B..

And shortly after when discussing cross training.

Jerry: It's like this cross training business, like not only, for instance,, like not only learning how to do it but how to develop samples well so if I'm not doing it, I'm sitting beside the drill polishing it or something.

Moderator: You need cross training to help keep you busy?

Jerry: Yea, that's just it. So I can't do something else? I sat at the copier when I first started here. But I wouldn't want to do that all day, not very often.

Moderator: So if you get slow in one area, ^N that individual and teach them something else? Any other cross training issues, or anything else?

Mark: I think that you may have misunderstood me Shelly when I was talking about cross training as opposed to market.

Moderator: Uh huh?

Mark: I think it's two different ball games. Cross training and getting out working in the field is something else.

Moderator: So cross training across the technical lines, but not in marketing?

Helen: Right, except for marketing.

Mark: Right

Lois: Well it's like saying all of the sudden we're going to



put Helen in Engineering. I mean we can put her in the field and other areas, but marketing is too radical a shift.

Toward the end of the meeting, possible alternative strategies to deal with poor communication in the company were offered.

Mark: I see the door closing close to me and my mind is going a mile a minute, I'm thinking what are they going to do, are they going to ask for pay cuts, this, that and the other thing, so not talking to anybody

Helen: So that will straighten out the rumors, no, that's not true.

Jerry: I took it as a rumor

Helen: Take everything you hear with a grain of salt here, until you find out what's true.

Jerry: My mother told me to not believe anything I hear and half of what you see.

Helen: If Larry had responded earlier with a company memo, or something on the company meeting that we had, on what went on in this meeting, stuff like that would never have happened.

Moderator: It would have headed it off?

### Mourning

Members of this group appeared to experience a longer mourning phase than Group A. During the last third of the meeting, members shared that they trusted the process because previous group members had not revealed what was discussed (see trust and openness). Following this, they began asking questions about how the results were going to be used, which indicated that the members themselves were beginning the

termination phase. While one member expressed concerns about identifying people, another was not concerned about identifying herself in the results.

Mark: How are you going to present this to Larry?

Moderator: That's a good question. This is the first time I ever have done this, so what I've asked him to do, I told him that everyone is very interested in finding out about the results of the data. First of all I don't present by department, although I might be able to discuss patterns in those departments. But I make every effort to not identify anybody. So it's kind of a dilemma but I feel I have an obligation to not identify people. It's probably going to be presented in a broad way.

Mark: Are you going to give specifics like what Helen was talking about chauvinism.

Helen: Oh tell him, I would love for him to know.

Moderator: Well we have enough women in this study that I don't believe that's going to identify her.

Helen: Believe me, they know that I want to be cross trained, I told Robert and Larry that two years ago.

Moderator: And other people have mentioned that. This is not a quantifiable thing, where you can say 80% felt this way or that, so the minority opinion has the same amount of weight as the majority.

Helen: So you're going to present everything?

Moderator: Right, but I'll be able to categorize it.

Helen: Is this going to be in writing or are you going to be able to talk to him one on one?

Moderator: Yea, I'll give him a short handout with the results and I'd like to talk to him about it afterward...He told me that he certainly understands and believes it is very reasonable that people would want to know what the results are...

Helen: is this going to be a well here this is what's wrong?

Moderator: As far as what kind of recommendations?

Helen: Well as far as your overall presentation? Like poor communication, we need training?

Moderator: Well for one thing, I understand that ENVIRONMENTAL CONSULTING cannot invest in a lot of training right now. It will be like I will mention some of the problems discussed with certain options and alternatives recommended. I think it's useful to at least get more information. He told me that he's very excited about this because he believes people do not feel comfortable talking to him and they may be more comfortable talking with me and he may get better data. He said that anything he decides won't be very good without getting more information. This is more of an information gathering meeting than a decision making method. I think that people do need some kind of follow-up.

Jerry: The bottom line is Larry. He can do things or not.

Following the discussion of use of results, the group members began praising the company, discussing what they liked about it.

Mark: I don't think we need to put the blame on Larry. I think it was easier to "personal touch on everything but now we've gotten so large. I just don't think he has the time and I don't hold that against him. I hardly ever talk to him but that doesn't mean...

Jerry: We don't see each other, we work in different departments, but basically what we do is fix what's wrong. But Larry is my immediate supervisor. He doesn't have time to sit and talk with people.

Later

Moderator: Is there anything else, considering that Larry will be getting this information?

Jerry: I think you need to emphasize that although we all have gripes, that depending on our situation, bye and bye

Helen: We like Larry.

Mike B: We like Larry. We like the concept of ENVIRONMENTAL CONSULTING. It's just that we realize that some people took

advantage of it and I blame Larry for letting them do that.

Helen: It really burns me up.

Jerry: It burns me up too. I wouldn't have the conscience to do some of the things that I've seen people here do the company.

Mark: That's a shame because Larry's a generous person. I think he gives people the opportunities, more so than other companies, he gives people opportunities and I think some people got an opportunity and couldn't handle it or they just took advantage of it and just blew it and then left or were asked to leave. And it hurts the people who are still here.

While the members indicated that they wanted to close the meeting, they then began solving other problems and identifying needs in the company for change. This group both began the process of mourning themselves and asked more questions about how the report was going to be presented than any of the other groups.

In addition, this group stayed after the meeting to talk with one another and the moderator, whereas the homogeneous group left abruptly once the meeting was over.

### Conformity

There were few instances of conformity. For example, Helen felt that the field workers were suffering from poor morale, therefore it was understandable that they were under-motivated and not working hard. All three of the other group members disagreed, but Helen never conformed to their opinion, although she did indicate that she understood their position.

Jerry: A couple of my complaints about people I was involved with who are no longer here is that just basically that I'm having disciplinary problems with the guys on site because the guys know they're going to be leaving. It's like, "Who cares if we do anything or not. What are you going to do, fire me?"

Helen: But can you say you really blame them though? I mean it's not like...

Jerry: I mean I've got plenty for them to do.

Helen: Oh no, I'm not talking about you. I'm just saying that if I was one of those guys I'd feel that way too. To me, they've been given no reason to be motivated.

Moderator: Nothing to look forward to?

Helen: Right.

Jerry: I took some pictures. Before I go over there, I took some pictures and said look, I took some pictures, nothing's been moved, nothing's been changed, they didn't do anything on it.

Helen: I'd do the same thing if I were in their position.

Mark: Well I don't agree with that. I believe you need to have a professional approach to it.

Moderator: What do you mean by professional approach?

Mark: The company has a job to do. You're working for the company and you have a job to do. You have to put your personal feelings aside.

Jerry: Well we have got to be good. We have got some good people, I've worked for them. It's just that it seems like we have a few bad apples.

Helen: You have to have motivation. As much as I would like to be a professional person and consider myself a professional person, I have to have motivation. I need someone saying maybe if this goes well, we can do this with you.

And later.

Mark: I think that any experience you get, bad or good, is a good experience.

Helen; What are those guys doing on site that's going to add to their resume? They've been doing the same thing since they've been here. They're really not adding anything.

Mark: Well I don't know what's really going on down there.

Jerry,: What have they done? Everyone has learned to operate the machinery.

Helen: No that's not the point, I'm talking about from now until the end of the year.

Mark: They have a job to do. You can't say I'm not going to do that job because I'm not going to be here.

Helen: They should do their job, but I can understand their being lackadaisical and just sitting around up there and always taking a break.

While the group did experience storming phase, they also did not appear to conform to group opinion.

#### Pairing

Although pairing occurred, it appeared to shift. Helen appeared to compete for leadership with both of the male members. In the beginning, the two men paired and the two women appeared to pair on certain issues. Helen and Jerry appeared to pair toward the end of the meeting.

Early during the meeting, Mark and Jerry pair. In the following example, Mark and Jerry pair against Helen during the discussion of field worker morale.

Helen: I'd do the same thing if I were in their position.

Mark: Well I don't agree with that. I believe you need to have a professional approach to it.

Moderator: What do you mean by a professional approach?

Mark: The company has a job to do, You're working for the company and you have a job to do. You have to put your personal feelings aside.

Jerry: Well we have got to be good. We have got some good people, I've worked for them. It's just that it seems like we have a few bad apples.

Helen: You have to have motivation. As much as I would like to be a professional person and consider myself a professional person, I have to have motivation. I need someone saying maybe if this goes well we can do this with you.

Moderator: You're not motivated if you're not growing?

Mark: You need to develop it yourself.

Helen: Well it's really hard to do that sometimes.

Moderator: So some people are more proactive, try to make their own destinies?

Jerry: I think it's an individual thing. For anything I learn, everything I pick up and add to my resume makes me more valuable to other firms, not just ENVIRONMENTAL CONSULTING. I've got to look at it that way, if this company folds.

Moderator: (To Mark) Is that what you were saying?

Mark: I think that any experience you get, bad or good, is a good experience.

Helen: What are those guys doing on site that's going to add to their resume? They've been doing the same thing since they've been here. They're really not adding anything.

Mark: Well I don't know what's really going on down there.

Helen: No, that's not the point, I'm talking about from now until the end of the year.

Mark: They have a job to do. You can't say I'm not going to do that because I'm not going to be here.

Helen and Lois pair when discussing the loss of

secretarial support in the company, with Mark apparently annoyed, and then Helen and Jerry pair after an initial difference of opinion.

Moderator: What would be an alternative, if they can't hire somebody else?

Helen: I'll help answer the phones, it's just that when she leaves, we have to have someone stay in front from 9 to 1:30 everyday. And Lois and I were splitting it up which is OK because it was 2 1/2 days for each of us that we had to sit up there. But now that she's going to be gone, to me it's a demotion. I mean I am chained to that desk. I'm not allowed to walk away.

Lois: Yea, you can't go to the bathroom, you can't go anywhere.

Helen: Unless I have someone to sit in for me.

Lois: And you're not allowed to lock the door.

Helen: I wouldn't mind answering the phones, but with times getting tighter, people have to start doing a little more, I wouldn't mind that, but to me it's a demotion. And I remember one of the biggest things when I was hired and he came on a month after me and Kelly

Mark: (Interrupted) Let's get to the point here.

Helen: I'm sorry I'll do this real quick, and Kelly (the former lab manager) introduced me to him (Mark) as our new receptionist, and I had a business degree from Maryland. You didn't have any idea, huh? (to Mark) Kelly looked at him and introduced me as the receptionist, and I had a degree?

Moderator: Do you think those without technical degrees are not considered as important?

Helen: yea, right. I was told that person in our company because they didn't know anything about technical work.

Moderator: I understand what you're saying, certainly you're not a receptionist.

Jerry: Well, like I was introduced by Larry, Jeff, Robert and everybody as our driller.



Helen: But you are a driller.

Jerry: Well I am a driller but I don't only do that.

Helen: Well I'm not a receptionist.

Moderator: But his job title is field supervisor, is that not right?

Jerry: Yea, field operations manager and I do more of that than I do drilling.

Helen: Do you know what my job title is, you want a laugh? My job title is environmental scientist.

Jerry: That job title is merely a places pitch and that's it.

Helen: It's great when I have a technical letter I have to write because I have the title to go with it, but when I have to write an accounting letter, what do I call myself?

Jerry: I have to remind Larry and Jeff occasionally that I do have a college degree.

Helen: It's insulting, I think. It's like you're a little peon.

Mark and Helen appear to pair when discussing cutbacks in salaries during the Christmas holiday.

Helen: From the 26th to the 30th I guess. People, and this was quoted in the memo, lab and administrative were only guaranteed to be paid 4 hours a day during that period. Any environmental person is paid for all the billable work they do during that time.

Jerry Yea, but that's only billable time.

Helen: Yea, but still I could review a report and take eight hours a day to do it, if I were billable.

Jerry: Well the thing of it is that then you would be over budget.

Helen: Well you're different because you can get billed. I'm talking about me and Mike here.

Mark: We're almost penalized here because of our positions here.

Helen: Right, because we're overhead.

Mark: Yea.

Then halfway through the meeting, the two women again pair briefly, and then quickly the group moves into a norming phase.

Mark: You have to make the effort to communicate.

Helen: Right and I just think there's not, it goes back to my motivational idea, I just don't think there's enough motivation for people.

Lois: It wasn't set up that way, people aren't used to it and now it's like what are they making me do now?

Mark: I think that people are too busy to take an hour out of their day.

Lois: Most of the big companies do that.

Helen: Yea.

Mark: I think we're all too busy now.

Helen: See I don't see us as being as busy as other places.

Mark: See I do. I see people doing, each person doing more on their job generally.

And then Mark and Jerry storm briefly:

Jerry: That newsletter you have already done for that and that was great. Everybody enjoyed themselves.

Lois: Thank you.

Jerry: Even though we never got in it before but

Mark: Well let's offer an apology; we're sorry we didn't include you but

Lois: Everybody was like oh this is great we need to keep working on this and keep getting information but nobody wants to do it. They get mad at me but they won't give me any information.

After briefly storming, they begin performing.

Mark: Lack of communication is going to spur rumors. That's what the problem is now.

Helen: Yea, and that's why I don't think that Larry understands now is that is his lack of communication with the rest of this company is causing rumors.

Moderator: So people begin speculating about what the problem is?

Mark: Exactly

Jerry: It seems like it causes people to worry.

Helen: I mean I had someone come to me today and said do you want to hear aa good rumor? No.

Mark: Well people are going to gossip no matter what, but I don't think that it belongs in the professional environment. It's going to happen.

Helen: Yea.

Mark: Ideally it's wrong, it should be this is what's going to happen. I think it's wrong for employees to gossip.

Lois: So they should keep them involved.

There appeared to be a relationship of pairing with norming, leading to performing, in the group. Once members paired, they might have felt freer to discuss personal issues.

Degree of participation

This group had the greatest number of group members

participating and for the longest duration of all the focus groups interviewed. There were many examples of all four members participating. In addition, there also were more three-member conversations observed than the other groups. Helen and Jerry participated the most, with Lois participating the least. Regardless, there were several instances of four-person conversations and each member discussed something of importance to them during the meeting. It is possible that this high degree of participation is due to the changing nature of pairing in the group.

#### Awareness of need for change

This group identified many areas where change was needed.

Lois: I think you need to have one person that you're reporting to, to answer to, would be better.

Helen: Well you never have just one person you're reporting to. Like the project managers, I'll say here's my report to you. "I don't have time to review it now." If I take it there, they hate that writing style, though they read my whole thing. It's very unhelpful. I don't know how to write a report still, because everyone does it differently. There's no standard form. No standard order.

And on marketing:

Moderator: What about everybody being required to do marketing?

Helen: Well I think that some people are better at it than others.

Lois: You need to have the right kind of personality to do it.

Helen: I don't have the personality to do it. I think I'm too shy.

Mark: I think you're right. I think everybody needs to do a little bit of marketing, in the sense that say you're out somewhere and you bump into somebody and they say what do you do?

Helen: Yea give them a card or something.

Mark: You tell them that you do all these different types of analyses.

Helen: Give them your card, if you need me to do something.

Mark: Yea, call me next time you're free and give them to the right person instead of everybody here making cold calls.

Jerry: Yea I don't think we need to be making cold calls.

Several of the group members expressed a willingness to learn more and develop beyond their current jobs.

Jerry: It's like this cross training business, like not only, for instance, like not only learning how to do it but how to develop samples well so if I'm not doing it, I'm sitting beside the drill polishing it or something.

Moderator: You need cross training to keep you busy?

Jerry: Yea, that's just it. So I can't do something else? I sat at the copier when I first started here. But I wouldn't want to do that all day, not very often.

And, when discussing billable rates, they saw this problem impacting other departments, such as environmental sciences, in which no member worked.

Mark: The billable rates are another problem.

Helen: We have Beth as a field technician and have Robert, Mike and Audrey supervising her. What's wrong with this picture? Beth is only one person and she can't do everything. We can't send Robert out there billable at \$110 an hour or Audrey and Mike billable at \$85 an hour, that's going to blow

the whole budget and the company's never going to make any money. It's backwards, there should be lower level people and one manager.

Mike B: That's why we shouldn't have gotten rid of Harry Jackson, because his billable rate was down where you could show a profit.

#### Influence of individual issues

All of the four members appeared to have important issues that they wished brought to the meeting and would repeat these during the meeting. Helen felt morale, particularly among field workers, sexism and the need for administrative support were important issues and would continue to bring it up throughout the meeting. Mark was mostly concerned with technical staff having to take over secretarial duties. Jerry wanted to discuss the lack of field worker motivation and supervision while Lois appeared most interested in discussing the need for more secretarial support. While the group members did bring in their departmental issues or agendas, they also seemed willing to discuss others' ideas and issues.

Mark: No, I don't. Tim, I don't think he's been getting together with them either. The only way I know what's going on is by how many samples are coming in, and what kind of analysis they want.

Helen: That's pretty sad.

Most of the organizational problems were attributed to poor management style and employees who were not self-directed.

Mark: They come here and see how the company's run, the loose supervision; they think it's play time. They don't pull their own weight, they leave and go someplace else. Ever since I came here, I had the feeling, I don't think this is the right place to work for someone right out of school or someone without any other job experience.

Moderator: You think you need to be self-directed to work here?

Jerry: You have to be self-directed.

Mark: You come here right out of school and you think this is great, you can play video games, I can sit in my office.

And:

Lois: For some managers, yea. There's no standard procedure, you know.

Mark: I think different managers have different perceptions of what they think is important.

Jerry: Yea, that's why, what I got out of my review, the impression that I got out of my review is that I have total control over whether I drill or not due to the weather. It was the only thing that I got out of it.

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