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Exploring TQM : circular questioning as a new methodology to study organizational culture change

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study Organizational Culture change**

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San Jose State University, 1993

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EXPLORING TQM: CIRCULAR QUESTIONING AS A NEW
METHODOLOGY TO STUDY ORGANIZATIONAL CULTURE CHANGE

A Thesis

Presented to

The Faculty of the Department of Communication Studies
San Jose State University

In Partial Fulfillment
of the Requirements for the Degree
Masters of Arts

By

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May, 1993

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ABSTRACT

EXPLORING TQM: CIRCULAR QUESTIONING AS A NEW METHODOLOGY TO STUDY ORGANIZATIONAL CULTURE CHANGE

by Elaine Criger

This study presents an alternative approach for doing organizational culture research. The proposed approach enhances an existing research method, the Organizational Culture approach developed by Michael Pacanowsky and Nick O'Donnell-Trujillo, to include a specific type of interview process called "Circular Questioning."

This alternative approach coupled with questionnaire surveys was used to study an organization's culture which was undergoing major cultural changes, the implementation of Total Quality Management.

The quantitative research analysis (surveys) resulted in few statistically significant findings; however, some interesting trends were revealed. The qualitative data (Organizational Culture approach with Circular Questioning) provided historical, contextual information which was used to understand the organizational cultural change involved with the implementation of TQM.

Triangulation of Circular Questioning and surveys enriched each other and presented a more contextual, critical, and diversified analysis of an organization's culture.

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CHAPTER 1

INTRODUCTION

Background of the Study

The purpose of this thesis is to present an alternative approach for doing organizational culture research. The proposed alternative approach enhances an existing research method, the Organizational Culture approach, developed by Michael Pacanowsky and Nick O'Donnell-Trujillo (1982), to include a specific type of interview process called Circular Questioning (Selvini-Palazzoli et al., 1980).

Circular Questioning can be described as a type of questioning used by an interviewer to probe into the interviewees' perceptions of relationships and changes within the organization under study (defined further in this chapter). It can facilitate people's discussions of organizational cultural patterns that are not sanctioned by the status quo, i.e., management. This method can bring a more critical and diversified view of an organization undergoing cultural change.

This thesis will employ methods triangulation -- comparing and combining annual company surveys (logical, positivistic), circular questioning interviews (systemic), and in depth ethnographic knowledge (Pacanowsky et al.'s research methods) possessed by the author, to study a research site in an organization undergoing major cultural

change - the introduction of Total Quality Management (TQM). TQM can briefly be described as a company philosophy which allows employees to examine, analyze, and improve the quality of their products and processes with a goal of zero defects (TQM will be explained further in the historical background of TQM section).

A richer interpretation of employees' reactions to the organizational change occurring at their company as a result of TQM will be presented. Future organizational culture research is recommended to adopt multiple methods (triangulation) in order to obtain a more informative, diversified and critical interpretation of organizational culture.

Asystems' Background

As a Senior Business Analyst at Asystems (a pseudonym since the organization requests to remain anonymous) for only four years, my historical knowledge of this company was limited. The following histogram was developed by using Pacanowsky et al.'s (1982) Organizational Culture approach. The company library, interviews with long time employees and my personal experiences were mobilized to discover "organizational life" at Asystems.

Asystems, a developer of electronic reconnaissance systems (radar tracking and jamming systems), was founded in 1969 by Dr. John Smith (a pseudonym) and seven co-founders

in California. These men were all employees of Stanford University at the Stanford Electronics Laboratories in Palo Alto until they chose to leave due to the turbulent political atmosphere surrounding the Vietnam War and the Stanford campus. Soon after their departure, the Stanford administration chose to close down the laboratory due to student protests and political pressure.

In 1977, after several previous moves, Asystems moved with 204 employees to Sunnyvale, California. Dr. Smith was known as John to everyone and John knew most everyone by first name. Asystems was a very cohesive small group at this time. All employees felt they had a hand in managing and improving the company. According to some employees, there was a lot of energy, socializing and overtime. Employees were internally motivated at this stage. They wanted to see the company excel. They were excited about designing new and innovative systems. In addition to employees' pride in the organization, certain individuals were rewarded with stock options and bonuses as new products were sold. The employees celebrated with every new contract won by the company and every success created by the engineers. During this time all departments were located in one building. There was no need for memos or forms. If someone needed material ordered, s/he would walk over to purchasing (across the hall) and make a verbal request.

In the ensuing years, Asystems expanded its customer base by including foreign governments as well as the domestic defense community. Probably the most memorable moment for employees of Asystems was in 1982 when the company went public on the NASDAQ Exchange. The stock price soared from \$21.50 to \$30.50 the first day, making those employees holding stock options very happy and wealthy people. The atmosphere at the company was described to me by several senior employees as "unbelievable and electrifying." Anxiety was also a strong emotion at this time. Employees had to make major decisions involving their stock options. In one day, some people were made millionaires and others were set for life. There was also some sadness. People began to leave the company due to their newly found wealth. They retired or went on to start new ventures. Throughout all this excitement, the company managed to remain a growing company with a small business mentality. That is, policies and procedures were not a major issue, communications were not yet formalized, and a family atmosphere prevailed even though the company was growing at a steady rate.

By 1985, the headcount had grown to 713 and Asystems was no longer officially classified as a small business. But 1987 was the banner year for the company. The company

reached its sales goal of \$100 million and Bsystems (a pseudonym for a billion dollar organization) purchased Asystems for \$275 million. A different mood engulfed the company. The employees were proud to have come such a long way, yet they felt mixed emotions of sadness and anxiety. The employees knew they were losing their once cherished independence and management was concerned with the less-than-successful history of corporate buyouts. The party held for Bsystems buyout was different from the past parties held at Asystems, a little more quiet.

With Bsystems' influence, the small business mentality at Asystems was slowly becoming a thing of the past. Bsystems was becoming more involved with managing Asystems. A cultural shift was taking place. Policies and procedures were being written to integrate Asystems with Bsystems, especially in the corporate planning and financial arenas. Management style was slowly changing from semi-participatory to more autocratic, with Bsystems placing some of their employees in key positions at Asystems. Management and employees were less internally motivated. There were no more stock options, bonuses were almost nonexistent, and contracts were being lost as a result of defense cutbacks.

New buildings were built and bought in order to keep up with the growth of the company, numbered at 1,434 in 1988. The same year was the beginning of a downswing of the

economy (recession) in Silicon Valley, and at Asystems. Defense spending was becoming more competitive and scarce. Programs were being canceled by governments and, as a result, layoffs, redeployments and reorganizations became a way of life for the next few years. Bsystems' influence became stronger with more rules and procedures being implemented. Parties became fewer, and the organization became more structured and disciplined. Bsystems' executives were being sent down to assume positions in upper management. New hierarchial positions were created to segregate engineering under one roof and manufacturing under another (see Appendix A). Bsystems was looking for efficiency and structure.

1991 was the beginning of Total Quality Management at Asystems. The new TQM way of life was kicked off at a company wide meeting chaired by the President. Comical skits and speeches by management were presented to the employees in order to show management's determination and dedication to implement Total Quality Management. The next four to six months consisted of teaching all employees the principles of TQM during a two day course held on site and taught by co-workers. These co-workers were chosen by management and were trained by an outside consultant.

Soon after the last training course, Quality Improvement Meetings (QIMs) began, meeting once a week and

focusing on improving processes in each department; for example, accounting would like to expedite the flow of invoices through accounts payable, or manufacturing would like to reduce the amount of printed wiring boards being returned for repair.

In my opinion, the introduction of TQM at Asystems has affected all employees at all levels but in different ways. The majority of employees at Asystems appear to be either ambivalent or negative towards TQM at this time (almost two years since implementation), even though they were sufficiently trained in the TQM philosophy. Senior management, on the other hand, appears completely enthusiastic and devoted to total quality improvements. There is resistance from employees towards attending the weekly meetings or preparing any of the paperwork involved. Employees just want to do the jobs they were hired to do.

I have noted the normal distance between management and employees growing further apart. Many employees have revealed negative attitudes about their supervisor's leadership abilities in running their weekly QIMs, attending their weekly QIMs, and the effort involved in preparing for their QIMs. There has been more people voicing opinions to their coworkers about TQM than about any other topic in the past. People appear riled by the subject and have definite opinions about the process. These attitudes roused my

curiosity as to the causes for such dissent. Was employees' dissent based on management's edict to perform TQM, employees' lack of enthusiasm to change, or the noticeable lack of instant results? Is it possible that Asystem's culture can be one that is not accepting of new processes, such as TQM? Could the independent engineers and long time managers be so resistant to structure -- policies, procedures and processes (TQM) -- that it will be almost impossible to implement TQM successfully? Just what are the reasons for employees' dissatisfaction with TQM?

This is a study that will look at Asystems' culture over a one year time frame in which TQM was introduced using a new tool for organizational culture research called Circular Questioning. This tool will be used as a methodological extension of Pacanowsky and O'Donnell-Trujillo's (1982) Organizational Culture approach to gather a different type of data, a more historical and contextualized view of organizational culture (explained further in this chapter).

The following historical background of TQM will help define Total Quality Management further and explain its emergence in American industry and the effects it has had on employees at Asystems and nationwide.

TQM: Historical Background and Literature Review of TQM

Total Quality Management (TQM) was introduced to Japan

over three decades ago, in the 1950's, by a person known as the Father of Total Quality Management, Dr. W. Edwards Deming, an American. This was at a time when Japanese products were considered inferior in the international marketplace. It appears that American businesses in the 1950's were not ready to listen to Dr. Deming's words of advice on quality, but the Japanese were.

Deming's theory of statistical quality management was the same method taught to American engineers and technicians during World War II to help improve the quality of war materiel and at the same time increase productivity. The difference between the U.S. and Japan is that the Japanese took Deming's recommendations to heart while the Americans appeared to forget about the processes in the post-war market boom. The Japanese have used TQM as a virtual lifestyle and business philosophy, which appears to have meshed well with their culture. As a result, the Japanese proactive approach to quality is teaching the Americans that the way to get market share is through quality products.

Almost 30 years later, 1986, TQM had its start in the United States. The Pentagon introduced TQM as a necessary response to foreign competition and poor product quality. The Pentagon needed a system to improve product reliability in the midst of budget cuts and increased competition. They decided to shift from testing the product to testing the

process. They are requesting defense-electronic contractors to implement total quality controls to satisfy the DOD's new requirements. They intend to certify every supplier eventually. This process, sometimes called Total Quality Management (TQM), involves extensive training of all company employees and is expensive to implement.

With pressure from the Pentagon, the Department of Defense was the first to jump on the bandwagon by asking their suppliers to implement new quality processes at their companies. "It is no longer enough for military contractors and subcontractors to meet Department of Defense (DOD) product specifications. The DOD has a new bottom line: Test, check, verify and correct your manufacturing process to improve productivity, profitability and quality; if you don't, the DOD will" (Nazaruk, 1990, p. 163).

The official definition of TQM by the Department of Defense is: "Total Quality Management is both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organization. TQM is the application of quantitative methods and human resources to improve the material and services supplied to an organization, all the processes within an organization, and the degree to which the needs of the customer are met, now and in the future" (Scott, 1989, p. 67).

Some TQM analysts agree that companies introducing TQM

need to realize that quality requires total involvement, careful planning, training, and most of all, communication (Laza & Wheaton, 1990; McLaurin & Bell, 1991). Management must involve all employees in the process. "Management becomes a coach and cheerleader, providing the leadership and resources the effort needs" (Laza & Wheaton, 1990, p. 18).

The requirements -- total involvement, careful planning, training, and communication -- may not be developed characteristics at every corporation implementing TQM. From my business experience, some corporations do not have training departments while other companies have autocratic management styles which do not involve employees in the decision making process. Some companies have grown at such a fast rate that communication channels are not effectively used and planning has gone by the wayside in an effort to ship the product on time. Since all organizations are at different stages of growth and have developed different characteristics, each organization implementing TQM will have different advantages as well as problems. Those companies with an autocratic management style, ineffective communications, and product-oriented planning may encounter the most difficulties.

McLaurin and Bell (1991) conclude that the reason Total Quality Management is so difficult to implement is due to

the lack of communication skills necessary to achieve the cultural change needed for Total Quality Management. When McLaurin and Bell talk about cultural change, what they mean is "behavioral change, both personally and organizationally. It means changing the way we do things: the way we make decisions, the way we deal with our customers, and, most fundamental, the way we communicate with others in our own organizations" (McLaurin & Bell, 1991, p. 25). The major focus here is cultural change. McLaurin and Bell are expressing the need for cultural change as a necessity for the success of TQM. Certain cultural attributes need to be in place for TQM to take hold, such as non-critical behavior, cooperation, honesty, empathy, and equality (p. 27).

Throughout TQM literature, references to cultural change and TQM appear frequently (Klusman, 1989; Laza & Wheaton, 1990; McLaurin & Bell, 1991; Nazaruk, 1990; Scott, 1989). According to these authors, in order to implement cultural change, an organization must plan the restructuring in an organized, well thought out fashion. This restructuring could affect the organization's reporting structure, decision-making tradition, management style and moreover, their communication behaviors.

Management must understand that the process of cultural change is a slow one. People form strong attachments to

their heroes (founder and leaders), rituals (beer busts and Christmas parties), and ceremonies (award and shipping ceremonies). Any sort of change that strips down their relationships with these factors can leave the organization in disarray and the employees confused, insecure, and at times unmotivated.

One cannot simply change pieces of a stable culture without creating anxiety in the trenches. According to Dennison (1990), "Cultures change very slowly. Environmental change, leadership change, and high turnover all increase the rate at which culture change can occur -- a decade is a short period in which to expect institutionalized cultural change within a large organization" (p. 190).

One may infer from the previous information that TQM is an extensive, and expensive process to implement. Its implementation may require a corporation to change a little or to change a lot. It may require a company's objective to change from increased sales/profits to improved quality products. In either case, the implementation of TQM is a process of cultural change and this process is not without problems.

Typically "change is a slow and often painful process" (Daniels & Spiker, 1987, p. 118), yet TQM was introduced to Asystems in an urgent manner. An entire company went

through TQM training and implementation within a four to six month time frame. Goals were immediately set to improve on-time deliveries and to decrease the percentage of cost growth on programs. Demands were made for improvement in all areas of the company. Some managers' reviews were even tied to the level of improvement accomplished within their group. These may not seem like unreasonable task assignments, but one must consider the corporate culture. Historically, engineers at Asystems were left to design innovative communication systems and manufacturing was left to assemble them. This was a cohesive company with very few rules. Now it is a company with many requirements (weekly QIMs, documentation, cost/benefit analyses, on-time deliveries, decreased cost, etc.). The cultural characteristics which attracted many people to Asystems (innovation, creativity, and few rules) have quickly disappeared.

The following literature review will help provide an understanding of organizational culture and the research approaches used to study it. It will present two theoretical approaches (Functionalism and Interpretivism) which will lay the groundwork towards proposing a new research method, Circular Questioning, useful for studying organizational culture. Circular Questioning will prove to be extremely helpful in studying cultural change,

specifically change involved with the implementation of TQM at Asystems.

This new method will look at organizational culture in a way that no other current organizational culture research method has. It will look at the historical evolution of an organization's culture where survey methods usually ask questions related to the here and now. Empirical research methods usually study culture in terms of prearranged categories and questions (levels of satisfaction, effectiveness, cooperation) which differs from the new method which has flexibility with the questions asked. Empirical research is acontextual where the new method investigates the whole situation, the background and the cultural environment relevant to a particular event or social world.

Organizational Culture: Literature Review

The concept of culture has been the cornerstone of many studies which have sought to understand the inner workings of organizations. Many researchers have measured, evaluated, and described culture as a variable which exists within an organization (Deal & Kennedy, 1982; Pacanowsky & O'Donnell-Trujillo, 1983; Peters & Waterman, 1982; Schwartz & Davis, 1981). Yet, throughout the field of communication, the definition of culture appears to be inconclusive. For some, culture is the same as management style (Deal &

Kennedy, 1982); for others it is a pattern of basic assumptions (Schein, 1986), and still for others it is the shared values, metaphors, symbols, myths and stories which characterize an organization (Morgan, 1980).

In her article, "Concepts of Culture and Organizational Analysis", Linda Smircich recognizes the varying conceptions of culture which exist within the organizational communication arena and how these "different conceptions give rise to different research questions and interests" (Smircich, 1983, p. 339). Specifically, Smircich categorizes these conceptions into two broad perspectives: (1) culture as a critical variable, and (2) culture as a root metaphor. The difference in the above approaches to organizational culture research lies in the basic assumptions researchers make about both "organization" and "culture." Neither of these perspectives provides its own definition of culture, but each emphasizes how it perceives and approaches the study of organizational culture. A reader is left to discern from the information provided his/her own definition of culture.

These two perspectives, otherwise referred to as the Functionalist and Interpretive perspectives, understand organizational culture in different ways. Functionalists (culture as a critical variable) believes culture is something an organization has -- a set of characteristics

that the organization possesses. By studying these characteristics Functionalists hope to discover a framework which management could use to influence and direct the course of their organizations towards corporate goals, as with TQM. As discussed earlier, some researchers and organizations believe a corporate culture should be modified prior to the implementation of TQM. This is a Functionalist perspective.

Interpretivists (culture as a root metaphor), on the other hand, see culture as what an organization is -- the essence of organizational life. Interpretivists believe that TQM, a new element of organizational culture, should be introduced in a way that is sensitive to the existing culture in order to evolve together into a new and hopefully more productive entity.

Linda Putnam and Michael Pacanowsky (1983) further divide the Interpretive approach into two basic research traditions: naturalistic and critical. Naturalistic researchers evaluate, describe, explain and try to understand the organizational culture as a naturalistic process. However, critical researchers differ with respect to evaluating an organization: "Critical Interpretivists aim to uncover communication distortion and to free individuals from exploitation, alienation and arbitrary forms of authority" (Putnam & Pacanowsky, 1983, p. 48).

Simply put, Interpretive theory seeks to understand and/or to change organizational culture, while Functionalist theory seeks to enhance organizational effectiveness. These two research perspectives, discussed in more detail in the following sections, appear to have their strengths and weaknesses. Some scholars argue that the strengths of both methods (Functionalism and Interpretivism) can and should be combined in studying organizational culture (Daniels & Spiker, 1987, p. 111).

These two approaches to culture should help provide more insight into organizational culture methodologies. That insight will be used to introduce a different method for use in organizational communication research. This proposed method will combine aspects of the Functionalist and Interpretive Perspectives with Circular Questioning, a qualitative type of questioning developed by family systems researchers from the Milan Family Center in Italy. This new research method will improve upon existing research methodologies in that it will gather more historically contextualized information.

This new method will improve upon survey questions which are designed to elicit specific answers to linear questions designed by management. The new method, Circular Questioning, will probe further than linear questions. Instead of focusing on snap-shot like opinions or

perceptions, Circular Questioning elicits perceptions at different points in time in the company's history, and facilitates the comparison of these multiple opinions. The answers to these questions will provide contextualized information about organizational change as situated in the company's history.

Functionalist Perspective

A Functionalist views culture as just another organizational variable such as gender, size, or product. They believe this variable can be molded and shaped for the purpose of producing organizational effectiveness. Organizational effectiveness is defined here as an organization's ability to produce the desired effect it sets out to do in its charter or annual plan, such as high profits, better technology, increased buyout potential, low employee turnover and/or on-time deliveries. Certain behaviors are required by an organization in order for it to be effective. For example, if a company had a high employee turnover ratio due to verbal disrespect of management to employees, the organization would probably be less effective than it could be if this cultural trait (verbal disrespect) were not condoned by the organization. High turnover leads to higher training costs and increased learning curves which leads to decreased effectiveness.

The Functionalist research paradigm dictates a

methodology that reduces dynamic and ever-changing organizational life into "key variables," and observes and measures them accordingly. The researcher is distanced from the scene s/he is analyzing in order to understand culture in a way which generates useful empirical knowledge. The researcher treats social interaction as materialistic entities and treats the researched as tangible variables. The research agenda derived from this view is to chart differences among cultures, locate clusters of similarities, and draw implications for organizational effectiveness. Functionalist research is characterized by studies of variables such as "structure, size, technology and leadership patterns" (Smircich, 1983, p. 344). By studying these variables, researchers aim to develop universal laws that can explain and predict organizational effectiveness.

The ability to influence the course of an organization became ever more popular with Peters and Waterman's book In Search of Excellence and Deal and Kennedy's book Corporate Cultures, both published in 1982. Both books were best sellers that encouraged executives to be more aware of the corporate culture in which they operate. These two books present a wide range of organizational examples about how "strong" organizational cultures can lead to increased profits and excellence. Both books ultimately focused on ways to influence the culture in order to create "strong"

cultures which, in turn, will result in effectiveness and profitability. For example, Peters & Waterman have generated a list of eight attributes which characterize, in their opinion, an excellent company. They hope that their information will "illuminate just what values ought to be shaped and managed..." (Peters & Waterman, 1982, p. 26).

The overall implication of these two books is that "strong" cultures (shared values) are important in unifying an organization and contributing to its overall effectiveness. This is a Functionalist view of organizations which has been strongly influential with American and foreign businesses.

Two other journal articles, published in the early 1980's by Noel Tichy (1982) and Schwartz and Davis (1981), focused on managing culture. Both of these articles appear to be Functionalist in nature as they focus on managing change by managing economic, technical, political, and cultural factors.

An example of managing cultural factors is when Tichy states that an "organization must determine what norms and values should be held by its members" in order to manage change effectively (Tichy, 1982, p. 63). Tichy apparently believes a corporation can determine its employee's values. Schwartz and Davis (1981) both agree that it is very difficult to change culture, but not impossible. They

believe cultural change is a lengthy and arduous process which involves gradually reducing the perceived differences between current norms and the new behavior required, another example of modifying cultural factors.

Like Peters and Waterman (1982) and Deal and Kennedy (1982), the underlying message of these two articles is that it is possible to manage and change corporate culture in order to revamp an organization with the motive to create a more competitive and profitable business.

Eventually, Functionalists added cultural variables (e.g., stories, myths, legends, rituals) to those that they typically study (e.g., leadership patterns). These cultural variables are treated as hard, tangible facts (Putnam & Pacanowsky, 1983, p. 34). They "take on static or immutable qualities in that their characteristics rarely change, at least not through their own volition" (Putnam & Pacanowsky, 1983, p. 34). These cultural variables are seen as a symbolic means of communication which can be used to build organizational commitment, convey a specific management philosophy, or motivate personnel. Moreover, insight into these variables is used to facilitate overall company effectiveness.

A key contribution of the Functionalist theory has been the "creation and elaboration of a language for the management of organizations" (Putnam & Pacanowsky, 1983,

p. 222). Functionalists have studied the relationships between job design and employee satisfaction, superior-subordinate relationships, organizational effectiveness and organization-environment in order to provide management with a specific framework which will aid them in modifying cultural attributes. As Putnam suggests, "this theory is used for the purpose of prediction and control" (Putnam & Pacanowsky, 1983, p. 223).

Total Quality Management appears to have been designed from a Functionalist perspective, in that it implies an expectation that the culture of a corporation may need to be modified before the introduction of TQM. According to some TQM literature, a TQM environment requires a participatory management style, internal motivation, cross-functional reporting structures, equality, empathy, flexibility, and much more (Laza & Wheaton, 1990; McLaurin & Bell, 1991). According to these authors, having specific cultural attributes in place prior to the implementation of TQM will help improve the probability of success of TQM.

But how easy can it be to train an autocratic manager into a manager who can listen, learn and change? How can the stereotypical ex-major in the Army, now a manufacturing manager, become flexible, empathetic and motivating? TQM is asking people to change some basic communication patterns, and as we all know, they are not an easy things to change.

Perhaps an organization can benefit from others' attempts at TQM by learning why it is successful in some corporations and not in others; or, why some employees embrace the process and others don't; and, whether a specific corporation's culture can accept the implementation of TQM. The Interpretive research paradigm, presented next, may provide an alternative perspective.

Interpretive Perspective

Functionalist organizational theory focuses on culture as a variable which can be measured, studied, then molded and shaped in order to create a more effective and profitable organization. Interpretive organizational theory focuses on culture as a root metaphor. Interpretive research shifts from what organizations do and how they may accomplish it more efficiently and profitably, to how organization is accomplished and what it means to be organized. The research agenda derived from this approach is to "explore the phenomenon of organization as subjective experiences and to investigate the patterns that make organized action possible" (Smircich, 1983, p. 348). The Interpretive paradigm explores the process of organizing by participating and by exploring the participants. The researcher becomes part of the organization in an attempt to understand the process through which shared meanings are created, maintained, and changed.

Although many other researchers have written studies on the Interpretive perspective (e.g., Morgan, 1980; Putnam, 1983; Smircich, 1982), this research will focus on Pacanowsky and O'Donnell-Trujillo's perspective on Interpretive research methods because their path of inquiry is different from other Interpretive and Functionalists perspectives. They feel their approach allows a researcher to ask different, yet interesting questions about organizational life. Their approach begins by liberating their conception of what counts as an organization and what counts as organizational behavior. This shift has allowed them to refocus their notion of the role of communication in organizations thus "liberating the kinds of questions that we as organizational communication researchers can legitimately ask" (Pacanowsky & O'Donnell-Trujillo, 1982, p. 117). This is in opposition to a traditional approach which tries to isolate organizational variables "so that managers can manipulate organizational effectiveness by bringing their administrative powers to bear on those crucial instrumental variables" (Pacanowsky & O'Donnell-Trujillo, 1982, p. 119).

Pacanowsky and O'Donnell-Trujillo (1982) focus on the process of human interaction. They believe that organizations are places where people do a lot of things other than work, such as joke, gossip, arrange parties, and

start romantic relationships, all of which constitute organizational life. The authors present an alternative to the Functionalist perspective for doing organizational communication research with the underlying motive being understanding how organizational life is accomplished communicatively. They labeled this approach the "Organizational Culture" approach.

Pacanowsky and O'Donnell-Trujillo also advocate an approach to research which requires the researcher to actually experience organizational life, yet at the same time forewarns them to make the experience "strange." This allows the researcher to continue questioning and researching once the organizational environment becomes familiar and comfortable. They suggest doing collaborative research with one researcher being immersed in the organization while the other researcher interprets the data. This increases the strangeness of the experience since the researcher interpreting the data is continually working with the inside researcher to clarify the information received.

The authors call their approach a "non-managerial oriented account of sense-making in a particular organization" (Pacanowsky & O'Donnell-Trujillo, 1982, p. 121). Non-management research is defined in this study as research without prearranged questions designed by management to solicit preconceived data for organizational

use. This differs from the Functionalistic research which, as discussed earlier, is managerially based and centers on a quest for universal generalizations with the intent to increase organizational effectiveness.

Pacanowsky and O'Donnell-Trujillo believe their approach should be a story of organizational life in all its fullness told by the participants involved. The story is developed by detailed observations of the organization's members in action and detailed interviews (formal or informal) of organization members describing their actions. And, as mentioned earlier, their research methodology also requires the researcher to be an organizational participant. The combination of these two activities is called participant observation. Participant observation allows a researcher both to understand the meanings of the employees and to make those meanings explicit. They suggest a lot of note taking, tape recordings, transcribing, picture-taking and collecting of organization documents. This approach differs dramatically from the Functionalistic-based empirical, quantitative methods whose measurement is the selective collection of data according to some prior hypotheses.

Pacanowsky and O'Donnell-Trujillo recommend a narrative form of an ethnographic study. This type of analysis attempts to tell a coherent story of the social action. It

tells a story with characters in roles inspired by motives. This narrative must be a scientific narrative and must be "an empirical story founded on systematic evidence gathered in accordance with the rules of science" (Anderson, 1987, p. 260). Ethnographic studies aim to capture human experience in symbolic form which can allow a reader to learn the diversity of human life. This differs from the Functionalist approach in that its objective is to make generalizations and predictions after capturing their empirical data.

An illustration of this approach to organizational culture research appears in an ethnographic study of police officers (Pacanowsky & Anderson, 1982). This research was conducted out of general curiosity about the detailed workings of a particular social world. The researchers wanted to understand what being a police officer was all about. The research team consisted of six members who intermittently rode with the police officers over a four month period. The research team was involved in approximately 160 hours of normally occurring conversation (no formal interviews) in which notes were taken on what was said.

The interpretive analysis was conducted by interpreting the data gathered rather than coding the observations into preplanned categories. The researchers' interpretation was

grounded in the talk and social actions of the police officers. The purpose of this type of research was not to provide a more valid explanation of the data gathered, but an alternative explanation of the social world being observed. The reader of this type of analysis is left to decide if the researcher's explanation is a "good" one or one that makes sense to him or her.

This research methodology, while very informative for those researching a specific social world, provides a different type of data than the data that could be collected using the basic requirements of the Organizational Culture approach with the addition of Circular Questioning. It is proposed that Circular Questioning can be used to enrich the data collection process of Pacanowsky et al.'s research methodology. Circular Questioning, explained further in the next section, focuses on differences and changes occurring within an organization by documenting systemic patterns.

Introduction of Circular Questioning

A weakness of the Organizational Culture approach lies in the interview process suggested by Pacanowsky and O'Donnell-Trujillo (1982). The researchers gathered their data by taking notes of naturally occurring talk and/or by asking normally occurring questions which arose during their ride-alongs. Very little information was given by the authors as to what kinds of questions were asked and how

they were asked during the interview process, except that they were "normally occurring" questions.

Answers to normally occurring questions are helpful, but a more substantial amount of information could be obtained by adding another methodology to the study of organizational culture, Circular Questioning.

Circular Questioning, first developed by the Milan Associates, is based upon Gregory Bateson's theory of double/multiple descriptions (Cecchin, 1987; Penn, 1982; Selvini-Palazzoli et al., 1980). Bateson believes that human communication is motivated by a difference between two information sources that makes a difference on a person's perception. Bateson believes that to achieve more contextualized perceptions, a human being will always resort to change in the relationship between himself and the external object. The underlying belief of Circular Questioning is that all knowledge of external events is derived from the relationship between events. "What humans perceive easily is difference and change -- and difference is relationship" (Palazzoli-Selvini et al., 1980, p. 8).

Human expression is predominately single description by nature. For example, if you asked a friend how he was feeling today, he may respond "not very good." This is single description (linear) and is the manner in which most people communicate. An example of double/multiple

description, which is rarely used in conversation, might be "How are you feeling today compared to yesterday?" This time the response may be "much better." The answer to the second question is motivated by a difference between two information sources (today and yesterday) that provides a different perception (from "not very good" to "much better") than the single description response. The person's current state is not "good," a seemingly universal unchanging perception. Rather, it is comparatively "good" or grammatically speaking, it is better. By asking circular questions, one may gather information about change or trends from the participant's perspective.

Circular questions differ from Pacanowsky and C'Donnell-Trujillo's Organizational Culture approach whose "normally occurring" questions are used to study organizational life in the here and now. Circular Questioning is an improvement to the Organizational Culture approach in that it allows for greater control over the research questions asked resulting in richer, more contextualized information.

Circular Questioning was originally developed to help a family therapist understand a family's coalition over time. Circularity as defined by the Milan Associates is "the capacity of the therapist to conduct his investigation on the basis of feedback from the family in response to the

information he solicits about relationship and, therefore, about difference and change" (Penn, 1982, p. 270).

Just as a family may have coalitions and illnesses, so may a corporation. Corporations go through reorganizations, redeployments and recessions which may cause cultural change and anxiety. Circular Questioning can be used as a technique to study comparative rather than universal feelings, attitudes, resistance and cooperation of the organization's members over time.

The ability to understand Circular Questioning is as "simple as understanding the differences between a line and a circle" (Penn, 1982, p. 270). The circular process focuses on feedback loops to reintroduce a part of the interviewee's own words back into the next question. The goal of Circular Questioning is to fix a point in the history of the organization when employee attitudes underwent shifts, such as the point of introduction of TQM. Circular questions can help the interviewer draw an arc between the past and present. This arc helps one understand where a significant change occurred and as a reaction to what incident(s).

An example of this process can be explained more easily by comparing a linear question with a circular question. A researcher interviewing a subject for a research project on human perception may ask the interviewee how fast the car

was going that he just saw. He may respond "very fast." A researcher using Circular Questioning may ask the interviewee how fast that same car was going in comparison to the car that just passed it. His answer may now be "slow, compared to the other car." These two questions resulted in two completely different answers. The second question allows an interviewee to answer a question in relation to "something" else. The circular interview also allows a subject to elaborate on his answers. In this case, the interviewee may have revealed that he had been raised on a farm where the average speed people drove was 25 mph. Therefore, anything over 25 mph appeared fast.

Selvini-Palazzoli et al. (1980) and Penn (1982) provide different ways of asking circular questions. The principle is very simple (see Table 1). The interviewer needs to elicit or encourage the discussion of at least two sources of information. These two sources may be arranged via people (you and your coworker) or time (present versus past) or objects (Accord and Integra).

Table 1
Linear and Circular Questions

Linear Questions	Circular Questions
How do you feel about TQM?	How do you feel in comparison to your coworkers about TQM? (people, you and your coworker)
How would you rate the overall quality of your work?	How would you rate the overall quality of your work now compared to a year ago? (time, present vs. past)
How well did you golf today?	How well did you golf today compared to the way you use to play five years ago? (time, present vs. past)
How do you like the new Honda Accord?	How do you like the new Honda Accord compared to the Acura Integra? (object, Accord and Integra)

Answers received from circular questions are significant for organizational culture research in that they are more contextualized since it considers difference between at least two "somethings" (e.g., time, object, people) which results in the historical documentation of organizational change. This differs from the information obtained through linear questions such as "do you understand how quality is measured in your work group?" or "how would you rate the overall quality of work done in your work group?" (1991 Bsystems Employee Opinion Survey) which focus

on the opinions of employees on the day they are questioned. An employee may rate the level of quality in his work group as below average. Answers to circular questions may reveal that he felt the quality of his group was below average when compared to the company he recently left. This company helped develop his standards of quality. However, he does feel that his current work group's quality is very good compared to other departments within his current corporation.

Circular Questioning can prove significant when studying the culture at Asystems. The researcher can begin the interview with a few linear questions which would give the researcher an opportunity to obtain "words" typically used by participants in the studied cultural environment. The words used to respond to the linear questions can then be used to design the subsequent circular questions. The researcher can ask employees what their life was like and how their life has changed with the weekly QIMs underway. With the information received from these questions, the researcher can narrow the preceding questions by reintroducing parts of the interviewees' answers into the next questions. The following dialogue is an example of what a Circular Questioning interview may be like.

Interviewer: How do you feel about your position at this company? (linear)

- Employee: Oh, it's alright, I guess.
- Interviewer: Alright? Was it any better a year ago compared to now? (circular)
- Employee: Yes, it was much better a year ago. I had a really good supervisor then.
- Interviewer: What happened to your supervisor? (linear)
- Employee: We were all reorganized and she works for another division now. I really miss her.
- Interviewer: How is this supervisor any different from the supervisor you have now? (circular)
- Employee: I don't know. I guess I could tell her anything. I could recommend new ways of doing things and they would even get implemented sometimes.
- Interviewer: Do you feel less able to voice your opinion now compared to a year ago? (circular)
- Employee: Sure I do. I need this job. This darn recession. It's really hard to get another job. I have a lot of friends out of work.
- Interviewer: Do you feel less secure with your job than your coworkers? (circular)
- Employee: Ya, probably. I speak up more than everyone else and I don't think my boss likes it.

These kinds of questions can be used to understand why a company, once cohesive, is now, in comparison with the past, having personnel problems, why employees are feeling animosity towards management, or why manufacturing is no longer cohesive with engineering.

Circular Questioning could be useful in soliciting information from employees about their perceived

interpersonal relationships within departments, the relationship between departments and the relationship of the corporation within society. This information is useful for organizational culture research because it will help the researcher understand the changes noticed by employees and managers due to the introduction of TQM. For example, this information may help a researcher answer questions like: Have employees' relationships improved because they now feel they are working for a common goal, quality improvement? Have departments become more competitive in their quest for increased recognition by senior management for quality improvements? Do employees feel their company's reputation has changed as a result of the implementation of TQM? The data attained from circular questions can steer a research team towards a more contextualized and, therefore, more insightful conclusion.

Triangulation

A recommended enhancement to the Organizational Culture approach is the introduction of Triangulation into the research methodology. Triangulation can broadly be described as a "combination of methodologies in the study of the same phenomenon" (Jick, 1979, p. 24) In communication terms, triangulation is the convergence of quantitative and qualitative research methods. Methods triangulation proposes that these two methodological approaches be viewed

as complementary rather than in opposition.

Triangulation can have more than one meaning in the convergence of more than one method. First, the use of one method could be used to validate the other method. This validation process is used to ensure the results obtained are genuine and not the result of a specific method chosen. Second, the use of Triangulation which will be the focus of this study is the multi-method approach (qualitative/quantitative) as a technique for gathering additional data which can "capture a more complete, holistic, and contextual portrayal of the unit(s) under study" (Jick, 1979, p. 603), organizational culture and Total Quality Management. Multiple measures can uncover some unique information which otherwise may have been neglected using a single method.

The qualitative data will be gathered through personal interviews with Asystems employees using Circular Questioning methods. Quantitative methods include two annual surveys distributed by Bsystems to Asystems employees in 1991 and 1992 (before and after the implementation of TQM). This survey measures employees' attitudes, using a 5-point Likert scale, about many corporate areas such as health/safety, benefits, supervisors, coworkers and, of course, TQM. This information will contribute to greater confidence in the interpretive data and provide additional insight.

Circular Questioning will be incorporated into the Organizational Culture approach developed by Pacanowsky and O'Donnell-Trujillo (1982). These methodological enhancements will be used to enrich our understanding of Asystems' cultural change initiated by the introduction of TQM.

Research Focus

To search for a contextualized understanding of Asystems with TQM, this paper presents an epistemological elevation of Pacanowsky and O'Donnell-Trujillo's Organizational Culture approach by using Circular Questioning to enhance the area of data gathering.

By incorporating this new data gathering method into organizational culture research, this study will show that the quality of information received using this method is far more informative than either quantitative data gathering methods or the Organizational Culture approach alone.

This new method will be used to study the cultural changes at Asystems as a result of the implementation of Total Quality Management. This research will not be looking for answers to specific questions regarding TQM, but rather will focus on the depth and richness of information which can be obtained.

The information obtained can either be used to influence and direct the course of Total Quality Management

(Functionalist perspective), or it can be used to understand TQM's progress at Asystems and to uncover underlying reasons for its success/failure (Interpretive perspective).

CHAPTER 2

QUANTITATIVE METHODS AND DATA

Methods

This chapter describes the survey method that was used at Asystems in 1991 and 1992. Access to this set of data was granted by Bsystems for use in this research only. The goal of this chapter is not to make generalizations as to the success/failure of TQM, but to present the type of data which are available for analysis through quantitative research methods. These data will be used to understand the changes which took place at Asystems over the one year time frame in which TQM was first introduced and one year into its implementation. Later, in Chapter 4, the depth of these data will be compared to and integrated with the data retrieved using the "Organizational Culture" approach with the addition of Circular Questioning.

Pre-test Subjects

The pre-test was conducted at Asystems in March of 1991. This survey was designed and distributed to Asystems' employees by the Statistical Research department at Bsystems. Surveys were sent to approximately 1000 employees. At this time, employees were undergoing TQM training but had not begun their weekly QIMs. Questionnaires were sent out to all employees through

interoffice mail (see Appendix B). All subjects were of different ages (19 - 70), ethnic and educational backgrounds, and employment levels. Employees were given at least one week to fill out the survey and were instructed to return the completed survey in the self-addressed, stamped envelope to Bsystems.

Post-Test Subjects

The post-test was conducted at Asystems in March of 1992. Bsystems chose to distribute questionnaires to approximately ten percent of the organization. The ten percent was determined by the last digit of the employee's social security number and accounted for approximately 90 employees. The survey subjects were again given at least a week to fill out the survey and were asked to mail it back to Bsystems in the envelope provided.

Procedures

Both the pretest and the post-test were conducted as part of the parent company's annual employee survey. Five hundred and ninety one subjects responded to the pre-test ($n = 591$) and 75 responded to the post-test ($n = 75$).

Survey respondents were asked questions related to their job, coworkers, supervisor/manager, internal suppliers, information sources (grapevine, management, newsletter, etc.) and TQM (Asystems refers to it as CQI, Continuous Quality Improvement). Other questions related to

health and safety, training, career development, pay and benefits, and ethics were also asked but will not be included in this quantitative analysis. As described in the previous literature review, these categories do not directly affect nor are they affected by the implementation of TQM.

Independent Variables

Since this survey was designed by Bsystems for its own use, it does not contain the variables I would have chosen for this study. Based upon two dimensions, (1) employee levels (management/employees), (2) before/after TQM's implementation (1991/1992), four independent variables were constructed. These four independent variables shown below were studied and used to compare with the new organizational culture research method presented in Chapter 3. The four independent variables and their abbreviations are as follows:

1. Change in management's perceptions from 1991 to 1992 (Mgmt 91-92).
2. Change in employees' perceptions from 1991 to 1992 (Empl 91-92).
3. Differences between management and employees' perceptions in 1991 (1991 Mgmt-Empl).
4. Differences between management and employees' perceptions in 1992 (1992 Mgmt-Empl).

Dependent Variables

The dependent variables were subsumed under three areas: Satisfaction, Effectiveness, and TQM. These areas

were determined from the previous Functionalist literature review which made references towards TQM's involvement with improved effectiveness and employees' level of organizational satisfaction.

The survey questions were then indexed into the three areas based on intersubjective opinions of the researchers and an Asystems employee. The first area, Satisfaction, was further divided into three subareas: job satisfaction, satisfaction with supervisor, and overall satisfaction. The second area, Effectiveness, was divided into five subareas: job effectiveness, effectiveness of supervisor, effectiveness of internal suppliers, information source effectiveness and overall effectiveness. Finally, TQM, the third area, was not subdivided since all questions related to opinions of Total Quality Management.

Bsystems used a 5-point Likert scale to measure employees' attitudes ranging from strongly agree (1) to strongly disagree (5). It is important to note that the scale is counter-intuitive in the interpretation of findings. The higher the mean, closer to (5), the lower the felt satisfaction, effectiveness, etc. The closer the mean is to (1), the more satisfied the employee is with the subject of the question.

Findings

A one-tailed t -test was used to assess the differences

between employee and management's attitudes and perceptions. The mean and standard deviation for each question was used to calculate the t -test with the level of significance set at .05. The results of the t -tests can be found in Appendix C. Tables 2 - 4 present the means for the four independent variables. An asterisk (*) will appear next to the mean if it proved to be statistically significant.

The statistical analyses used to evaluate the changes at Asystems over the one year time frame in which TQM was introduced reached an acceptable level of significance on 18 or 10% of the 172 possible scenarios (5 - Satisfaction, 7 - Effectiveness and 6 - TQM).

Satisfaction

The results in the area of Satisfaction were overall quite weak. Only 5 out of the 48 t -tests were significant. In addition, these five significant results were quite mixed.

First of all, all of the employees' satisfaction changes from 1991 to 1992 failed to reach significance, except for one. Employees felt more satisfied in 1992 than in 1991 with the manner in which their immediate supervisor/manager handles mistakes, $t(626) = 1.828$, $p < .05$.

Management's changes from 1991 to 1992 were also weak. However, there were two significant findings. Management felt more satisfied with their physical working conditions

Table 2

Asystems Overall Survey Results

Satisfaction Dimension

Sub Area	Question	Employee		Mgmt		1991		1992	
		• 1991	1992	• 1991	1992	Empl	Mgmt	•	Empl
Job Satisfaction									
1.	I like the kind of work I do	1.76	1.87	1.77	2.18	1.76	1.77	1.87	2.18
4.	My work gives me a feeling of personal accomplishment	2.25	2.30	2.15	2.20	2.25	2.15	2.30	2.20
8.	The amount of work I am expected to do on my job is	2.73	2.78	2.69	2.73	2.73	2.69	2.78	2.73
9.	How satisfied are you with your physical working conditions	2.39	2.38	2.62	1.82	2.39	2.62	2.38	1.82
10.	Considering everything, how satisfied are you with your job	2.51	2.52	2.23	2.50	2.51	2.23	2.52	2.50
Supervisor/ Manager									
13.	My immediate supervisor/manager handles mistakes in a positive manner.	2.58	2.35	2.54	2.64	2.58	2.54	2.35	2.64
20.	My immediate supervisor/manager treats me fairly	2.12	2.12	2.08	2.55	2.12	2.08	2.12	2.55
25.	How satisfied are you with the recognition you receive for doing a good job.	2.73	2.82	2.38	3.45	2.73	2.38	2.82	3.45
26.	How satisfied are you with the information you receive from management on what's going on in Asystems	3.25	3.20	2.69	3.09	3.25	2.69	3.20	3.09
27.	How satisfied are you with your involvement in decisions that affect your work	3.11	3.17	2.62	3.27	3.11	2.62	3.17	3.27
28.	Overall, how good a job do you feel is being done by your immediate supervisor/manager.	2.56	2.38	2.54	2.64	2.56	2.54	2.38	2.64
Overall Opinion									
82.	Considering everything, how would you rate your overall satisfaction in Asystems at the present time.	2.65	2.72	2.62	2.64	2.65	2.62	2.72	2.64

* = Indicates out of threshold

Table 3

Asystems Overall Survey Results

Effectiveness Dimension

Sub Area	Question	Employee		Mgmt		1991		1992			
		•	1991	•	1992	Empl	Mgmt	•	1992		
Job Effectiveness											
2.	My job makes good use of my skills and abilities		2.22	2.33		2.08	2.18	2.22	2.08	2.33	2.18
3.	I have enough information to do my job well		2.51	2.66		2.38	2.45	2.51	2.38	2.66	2.45
5.	Conditions in my job allow me to be about as productive as I could be		3.16	3.25		3.00	3.36	3.16	3.00	3.25	3.36
6.	I feel encouraged to come up with new and better ways of doing things		2.63	2.62		2.23	2.91	2.63	2.23	2.62	2.91
Supervisor/ Manager											
11.	My Supervisor/Manager gives me feedback that helps me improve my performance		2.66	2.66		2.31	2.82	2.66	2.31	2.66	2.82
12.	My Supervisor/Manager effectively corrects poor performance		2.92	2.81		2.69	3.27	2.92	2.69	2.81	3.27
14.	My Supervisor/Manager discusses with me how I can contribute to meeting the goals and objectives of my work group		2.77	2.64		2.38	3.09	2.77	2.38	2.64	3.09
15.	My Supervisor/Manager explains the relationship between my work group's goals and objectives and the larger organization's goals and objectives		2.92	2.81		2.62	2.91	2.92	2.62	2.81	2.91
16.	My Supervisor/Manager helps me solve work-related problems		2.51	2.50		2.38	2.91	2.51	2.38	2.50	2.91
17.	My Supervisor/Manager is available to employees		2.21	2.2		2.38	2.27	2.21	2.38	2.2	2.27
18.	My Supervisor/Manager promotes teamwork		2.59	2.40		2.38	2.55	2.59	2.38	2.40	2.55
19.	My Supervisor/Manager emphasizes high quality work		2.26	2.20		2.08	2.45	2.26	2.08	2.20	2.45
= Indicates out of threshold											

• = Indicates out of threshold

Table 3

Asystems Overall Survey Results
Effectiveness Dimension (cont.)

Sub Area	Question	Employee		Mgmt		1991		1992	
		• 1991	1992 •	• 1991	1992 •	Empl	Mgmt •	Empl	Mgmt
Internal Suppliers									
41.	I receive excellent products/services from my internal suppliers	3.20	3.05	3.23	3.80	3.20	3.23 •	3.05	3.80
Coworkers									
29.	The people I work with cooperate to get the job done	2.19	2.03	2.23	2.00	2.19	2.23	2.03	2.00
30.	The organization that I work with in doing my job cooperate to get the job done	• 2.69	2.47	2.46	2.82	2.69	2.46	2.47	2.82
31.	Employees I work with let each other know if they are not pulling their load	3.05	2.92	2.62	2.73	3.05	2.62	2.92	2.73
32.	Employees tell each other when they do good work	• 2.66	2.44	2.38	2.55	2.66	2.38	2.44	2.55
33.	Employees new to my work group are well qualified	2.73	2.73	2.38	2.73	2.73	2.38	2.73	2.73
34.	My work group does a good job in orienting new employees	2.95	2.79 •	2.54	3.55 •	2.95	2.54 •	2.79	3.55
Information Sources									
63.	My immediate Supervisor/Manager is effective in providing company related information that is important to me	2.54	2.60	2.23	2.45	2.54	2.23	2.60	2.45
65.	Bsystems News is effective in providing company related information that is important to me	3.02	2.98	2.92	3.45	3.02	2.92 •	2.98	3.45
Overall Opinions									
79.	Asystems is making the changes necessary to compete effectively	3.15	3.08	3.46	3.00	3.15	3.46	3.08	3.00

* = Indicates out of threshold

Table 4

Asystems Overall Survey Results

TQM Dimension

Sub Area TQM	Question	Employee		Mgmt		1991		1992	
		1991	1992	1991	1992	Empl	Mgmt	Empl	Mgmt
7.	Employees concerns are addressed when major changes (new processes, equipment, technologies, etc are introduced into my work area	3.12	3.13	2.85	3.30	3.12	2.85	3.13	3.30
22.	During the past year, my immediate supervisor/manager and I have scheduled discussions that help me improve my work performance	2.91	3.05	2.62	3.36	2.91	2.62	3.05	3.36
23.	Sufficient effort is made to get the opinions and thinking of people who work here	3.09	2.88	2.92	3.18	3.09	2.92	2.88	3.18
24.	I am comfortable voicing an opinion that management may not want to hear	2.74	2.73	2.92	2.64	2.74	2.92	2.73	2.64
39.	My work group uses the tools and techniques of CQI (TQM)	2.90	2.36	2.62	2.90	2.90	2.62	2.36	2.90
40.	My work group has taken the time to understand what kind of products/services our internal customer needs	2.77	2.32	2.69	2.60	2.77	2.69	2.32	2.60
42.	My work group is successful in reducing waste (materials, time, rework, rejections, etc.)	2.99	2.89	2.77	3.40	2.99	2.77	2.89	3.40
43.	I understand how quality is measured in my work group.	2.88	2.69	2.69	2.91	2.88	2.69	2.69	2.91
44.	How would you rate the overall quality of work done in your work group	2.32	2.12	2.17	2.36	2.32	2.17	2.12	2.36
The larger the mean score, the more negative the response. The smaller the mean score, the more positive the response. * = Indicates out of threshold									

in 1992 than in 1991, $t(22) = 2.233$, $p < .05$, and less satisfied with the recognition they received for doing a good job, $t(22) = 2.512$, $p < .05$.

If we compare the attitudes between the employees and management in 1991, no statistically significant differences appeared (even though the trend was employees were overall less satisfied).

In 1992, however, two comparisons reached significance. Management felt more satisfied than employees regarding their physical working conditions, $t(69) = 2.663$, $p < .05$. Whereas, employees felt more satisfied than management in receiving recognition for doing a good job, $t(69) = 2.012$, $p < .05$.

Effectiveness

The results in the area of Effectiveness were also quite weak. Only 7 out of the 88 t -tests were significant with no apparent connection between the significant findings.

First, all of the employees' effectiveness changes from 1991 to 1992 failed to reach levels of significance, except in two areas. These areas were "the organization that I work with in doing my job cooperates to get the job done," $t(632) = 1.836$, $p < .05$, and "employees tell each other when they do good work", $t(629) = 2.081$, $p < .05$. Both of these showed statistically significant improvement.

Management's changes from 1991 to 1992 resulted in only one statistically significant finding. Management felt less effective when it came to "doing a good job in orienting new employees," $t(22) = 2.883$, $p < .05$.

If one compares the statistical responses between employees and management in 1991, only one question resulted in a significant response. Employees felt less effective than management that they were doing a good job orienting new employees, $t(22) = 2.883$, $p < .05$.

If one compares the attitudes between employees and management in 1992, s/he will find three significant findings: management felt less effective than employees with the products and services that they received from internal suppliers, $t(64) = 2.20$, $p < .05$, with the job of orienting new employees, $t(66) = 3.255$, $p < .05$, and with the effectiveness of the Bsystems News, $t(70) = 1.702$, $p < .05$.

Total Quality Management

The statistical results in the area of TQM also did not reveal a lot of information. Only 6 out of the 36 t -tests conducted were significant.

Employees' opinions towards TQM from 1991 to 1992 showed improvement with the overall quality of work done in their work group, $t(626) = 2.009$, $p < .05$. The employees also felt that they were using the tools and techniques of CQI more, $t(601) = 4.159$, $p < .05$, and that their work group had

taken the time to understand what kind of products/services their internal customers need, $t(601) = 4.427$, $p < .05$.

Management's opinions towards TQM from 1991 to 1992 resulted in just one statistically significant result. They felt less successful in reducing waste (materials, time, rework, etc), $t(21) = 1.722$, $p < .05$.

When comparing the attitudes between employees and management in 1991, no significant differences appeared, even though the trends indicate that employees felt more negative than management about issues relating to Total Quality Management.

When comparing the attitudes between employees and management in 1992, two significant differences appeared. Management felt they were using the tools and techniques of CQI less often, $t(66) = 2.046$, $p < .05$, and were less successful at reducing waste than employees, $t(65) = 2.093$, $p < .05$. Surprisingly, in 1992, the trends took an about face and now indicate that management felt more negative than employees about issues relating to TQM.

Overall Trends

Before discussing the significant findings, some interesting overall trends appeared upon review of the statistical data. Again, note that as the mean increases the results are decreased levels of satisfaction, effectiveness, etc.

Even though there were few statistically significant results from the employee survey, the overall trends suggest otherwise. Of the nine questions relating to TQM, four reached a level of significance in at least one of the four areas (Mgmt 91-92, Empl 91-92, 1991 Mgmt-Empl, 1992 Mgmt-Empl). However, the trend for the same nine questions showed management's mean increased on seven of the questions from 1991 to 1992 while the employee's mean decreased on seven of the nine questions for the same time period. Of the 12 questions categorized into the satisfaction dimension, three reached a level of significance in at least one of the four areas. The trends again indicated that management's mean increased on 11 of the questions while the employee's mean increased on only seven. And of the 22 effectiveness questions asked, five reached a level of significance in one of the four areas. The trends for the same 22 questions indicate that management's mean increased on 19 of the questions while the employees' mean increased on only four. This empirical data suggest that management's level of effectiveness, satisfaction, and attitudes towards TQM issues have decreased over the last year while employees' attitudes have shown some improvement. Figures 1 - 3 represent graphically the average of the means for the four independent variables sorted by the dependent variables, Satisfaction, Effectiveness and TQM.

Figure 1
SATISFACTION

Figure 2
EFFECTIVENESS

Figure 3
TOTAL QUALITY MANAGEMENT

Discussion

The statistical results showed that from 1991 to 1992 management became more satisfied with the recognition they received for doing a good job. Management felt that company communications and employee orientation were less effective than they should have been. Management also felt that the products they received from their coworkers were less effective than in the past. Overall, the answers to the questions asked of management resulted in more negative responses. Only one question showed a sign of improvement, physical working conditions.

On the other hand, the statistically significant results obtained from employees indicated that employees became more satisfied with recognition and with management's manner in which they handled mistakes. They also felt that cooperation and quality had improved and that they were using CQI tools more often. Overall, the answers to the questions asked of employees resulted in more positive statistically significant responses.

These results indicate areas in which management became more dissatisfied or less effective than they wanted to and employees became somewhat more satisfied and effective from 1991 to 1992.

The results presented in this chapter reveal important distinctions in the direction of management and employee's

levels of satisfaction and effectiveness regarding organizational life and Total Quality Management.

The goal of this chapter is to present the type of data which can be obtained using survey methods. Generalizations were not made as to the success/failure of TQM. Hopefully, this chapter helped identify problem areas and trends which can be used to compare against the information obtained using the Organizational Culture Approach with Circular Questioning.

CHAPTER 3

QUALITATIVE METHODS AND DATA

Methods

This chapter describes the research methods used in the qualitative research conducted at Asystems during the fall of 1992. The goal of this chapter is to present the type and depth of information which can be generated for organizational analysis using the Organizational Culture approach and Circular Questioning.

Subjects

The subjects were eight employees from Asystems and are representative of the organization. They were chosen from different departments and were of different levels in the organization, ages, gender and length of employment. Three of the eight subject's interviews were chosen for in depth analysis and their interviews were transcribed (Appendix D). The three subjects were selected because they were from different divisions, were of different ages, and held different types of positions. They were a senior manager, a supervisor and an executive secretary from departments of Finance, Engineering and Materiels.

Procedures

Interviews were conducted by the author (an employee of Asystems) using Circular Questioning. A set of questions

was used during the interviews as a guide (see Figure 4). This allowed the researcher to narrow the subjects' conversations from overall opinions of Asystems towards opinions of TQM. Not every question was asked of every subject. These questions were used only to refocus an interviewee towards the topic being researched. The objective of each question is stated in parenthesis following each question in Figure 4. Interviews ran from approximately 15 minutes to 35 minutes.

The questions focused on changes which had occurred over the last year (1991 to 1992) in areas which were affected by the implementation of TQM; Satisfaction, Effectiveness, and opinions towards TQM.

The following list of research methods was followed by the researcher. These are the methods suggested by the Organizational Culture approach with the addition of Circular Questioning.

1. The researcher was an organizational participant who was immersed in the organization and experiencing organizational life. (Although I had been an employee of Asystems for four years, I did not begin my qualitative research until 1992).
2. Questions were not prearranged, except for the linear questions used to initiate conversation, and the guiding circular questions used to direct the conversation towards TQM.
3. Interviews were detailed and tape recorded.
4. Data analysis was collaborative (writer and advisor of this thesis).

Circular Questioning Guidelines

Name, job title, length of employment (info gathering)

How has your life here at Asystems changed from a year ago to now?
(triadic question, confirms empirical)

What things would you like to change at Asystems? Rank them.
(info gathering)

How do you feel about Total Quality Management at Asystems?
(info gathering)

Do you feel there are problems regarding TQM? What are they?
(problem definition)

Who do you believe is having the most difficulty adjusting to TQM?
(coalition alignment and ranking)

Who do you believe is having the easiest time adjusting to TQM?
(coalition alignment and ranking)

Do you agree with the way in which the staff of Asystems implemented TQM?
(agreement question)

How would you do things differently if you were to run the TQM process?
(info gathering)

Do you and your coworkers feel the same about TQM? If not, how do you differ?
(agreement question)

Do you and your supervisor feel the same about TQM? If not, how do you differ?
(agreement question)

Do you feel your relationship with your supervisor is more support now compared to a year ago, before the implementation of TQM?
(triadic question, confirms empirical)

Do you feel more satisfied with your work here at Asystems more now than a year ago? What do you attribute your increased/decreased level of satisfaction to?
(explanation question, confirm empirical)

Do you feel any different about voicing your opinion to management now as compared to a year ago?
(info gathering, confirm empirical)

5. The Asystems library (newspaper, clippings, internal newsletter, memos) was used to collect data.

The following findings are presented as an example of the type and depth of information which can be obtained through Circular Questioning.

Findings

The employees of Asystems have many different opinions regarding organizational change at their company over the last year. The majority of those interviewed attributed recent corporate change to defense budget cuts resulting in less research and development (R&D) and more marketing. Others attributed corporate change to one of the many reorganizations.

Another reason for recent corporate changes is Bsystems' increased hand in Asystem's management. One program manager believes that Bsystems' influence will help manage this company through bad economic times and make aggressive plans and decisions. Two other employees believe overhead costs are out of control resulting in the lay-offs over the last couple of years. They believe the layoffs have changed the morale at Asystems.

Employees believe many different factors, not just TQM, are responsible for the changes in Asystem's culture over the last year. However, they all agree on one item. There have been major changes.

Satisfaction

According to TQM principles, as corporate problems are solved and processes are implemented, it should become less difficult and more cost effective to perform one's job. Employees should be more satisfied as a result of this because they have helped improve corporate effectiveness and enhanced their job. So when asked if they felt any more satisfied with their work compared to a year ago, they answered:

"No, I feel it is about the same. I think there are a lot of challenges. The thing that makes it more difficult is the decreased defense budgets, the fact that it is much harder to acquire new business and maintain the same kind of level of business we have in the past." (Mgmt)

"No" He feels less satisfied and attributes that to lack of growth in his position. (Empl)

"Yes, it's diversified." (Empl)

"No" He believes the morale has contributed to his decrease in satisfaction. (Empl)

"Yes" She feels it is due to her change in management as a result of a reorganization. (Empl)

None of the employees interviewed felt that TQM was the cause of their satisfaction/dissatisfaction.

Effectiveness

As discussed in chapter one, TQM can not be effective without employee commitment. Employees are needed to participate in the process in order to enhance organizational effectiveness. According to Asystems

management, employees should actively participate in a weekly QIM and should vocalize what they feel are the defects and barriers within their work group. If people voice their opinions, they can recognize problems with processes and cooperate towards finding a solution which will result in a more effective department. Whether or not employees felt comfortable voicing their opinion prior to TQM; they are asked to do so now, at least in their weekly meetings. When asked if they felt any different about voicing their opinions, the interviewees responded with:

"Yes, I'm less likely to say something than a year ago because of the job market." (Empl)

"Yes, I feel it is more essential now than ever because we have some serious problems and if they are not properly dealt with they will get more serious." (Mgmt)

"Ya, I think maybe I'm a little more open because I'm a little more jaded." (Empl)

"No" She said she has never had a problem voicing her opinion. (Empl)

Two other interviewees felt they could not, have not, and will not be able to voice their opinions to their management. One program manager explains that his department manager is much too concerned with politics, so any opinion he voices goes nowhere. The other employee felt his supervisor has no power and finds it useless to say anything to him.

During a discussion with an interviewee about executive

management's portrayal of dedication and enthusiasm for TQM, an interesting remark was made. He said there "were some gung-ho people at the beginning of TQM (Mgmt) and there were some skeptics and the skeptics were not very vocal at the time." He now feels that a great majority of his colleagues feel similarly to himself (TQM was failing). This attitude is a significant change.

Total Quality Management

In relation to Total Quality Management, an abundance of information was obtained through these interviews. All interviewees had a definite opinion about TQM, some positive, most negative. When asked how they felt about TQM compared to a year ago, the interviewees responded as follows.

"I don't see a lot being accomplished by it. There is a lot of effort going in with nothing coming out."
(Mgmt)

"People are expecting immediate results. It's a cultural thing that has to be ingrained in everyone."
(Mgmt)

I think that is what is being attempted here." (Empl)

"The concept is a good one, but I think there were problems with its implementation." (Empl)

"It has done reasonably well in some areas of the company that deal with repetitive kinds of operations."
(Mgmt)

"I believe it has been a failure for the most part."
(Mgmt)

One person just laughed. (Empl)

The overwhelming opinion was that most people believe in the concept of TQM as long as they do not have to participate in it. These same people have recognized quite a few problems with the process of improving processes.

Just about every person interviewed had strong objections towards the paperwork involved with TQM. They felt that their time should be spent where it is needed most and that was not with preparing minutes, problem/solution benefit forms, and in calculating metrics. One person suggested having monthly rather than weekly meetings and preparing the paperwork on a quarterly basis rather than monthly.

Two of those interviewed felt there is another problem with TQM, the referral process. Both of these employees' QIMs sent referrals to the TQIT (Total Quality Improvement Team - the TQIT is the QIM at the president's level, including the president and his direct reports) and were awaiting a response. One referral was submitted over nine months ago and the other two months ago. They had yet to receive a response. This has demotivated the employees of these two QIMs. One QIM has even stopped meeting.

One manager interviewed questions whether TQM should be implemented at an R&D company, which Asystems is. He believes that "the system that was set up was not one that the engineering organization believes is worthwhile or fits

with their culture." Another interviewee felt that middle managers were not embracing TQM concepts. He believed middle managers felt it was a drain of their resources (time, budgets, etc.) and was probably not here to stay.

Some of those interviewed agreed that management is having the easiest time conforming to the concepts of TQM. Others believe those who are performing repetitive tasks, like manufacturing, are able to incorporate TQM concepts more readily. When discussing who they believed is having the most difficulty incorporating TQM, all interviewees agreed it was the average worker, especially engineers. One interviewee explained that "at the top everything is theory and once it gets delegated down through the food chain... to the people in the trenches that are actually carrying out the work..." it becomes much more difficult.

Discussion

The previous findings were the result of a collaborative data interpretation process, one of the requirements of the Organizational Culture approach recommended by Pacanowsky and O'Donnell-Trujillo (1982). One of the researchers was immersed in the organizational life at Asystems while the other was an outsider. The outsider was unfamiliar with the acronyms, terminology, reporting structure and many other organizational factors at Asystems. Collaborative research analysis allows the

outside researcher to react to the data that was collected by the inside researcher reducing the chance of miscommunications.

The data collected in this chapter using Circular Questioning has provided more contextualized information than Pacanowsky et al.'s (1982) "normally occurring" questions. For example, if one of Pacanowsky's researchers asked an Asystems employee "How do you feel about TQM?" He may receive a response of "I don't like it. I hate going to those weekly meetings." When asked a circular question such as "How do you feel about TQM in comparison to your coworkers?" an actual response was "I would have to say that today a great majority of my colleagues feel similarly to myself (that TQM is not effective), which is a significant change" (see Appendix D). This manager goes on to say that even his boss, the president, feels similarly. The answer to the circular question not only stated that TQM was not effective, same as the response from the linear question, but went one step further. You learned that this is a "significant change" for management. Management was feeling less positive about TQM, including the president of the company!

Here is another example of the different type of data attainable through linear and circular questions. The linear ("normally occurring") question is "Do you feel you

can talk to your supervisor?" The answer to that questions may be "Ya, we get along pretty good." The circular question states "Do you feel any different about voicing your opinion now compared to a year ago?" The responses are "Yes, I'm less likely to say something than a year ago because of the job market" or "Yes, I feel it is more essential now than ever because we have some serious problems and if they are not properly dealt with they will get more serious."

The answers received from the previous circular questions were more contextualized. They revealed that there are problems with the job market (recession), management has significantly change their opinion of TQM, and that there are some "serious problems" at the organization under study. Additional circular questions could be used to reveal what the "serious problems" are.

The information received from Circular Questioning can help provide a more contextual, historical picture of organizational life. It can enhance Pacanowsky et al.'s (1982) Organizational Culture approach by adding a different type of information to include in their ethnographic analysis.

CHAPTER 4

SUMMARY AND DISCUSSION

Summary

This chapter will consist of a brief review of the first three chapters. It will then evolve into a discussion on triangulation using all data accumulated in Chapters 2 and 3.

Much emphasis was placed on organizational culture research methodologies in Chapter 1, Functionalism and Interpretivism. It was hoped that a good background of these research methodologies would help the reader to understand some of the strengths and weaknesses of each which was used to develop a new methodology.

As discussed earlier, Functionalists study culture as just another organizational variable. The researcher's goal is to mold and shape culture for the purpose of improving organizational effectiveness. Functionalists want to create a framework which management could then use to direct and influence the course of their organization. TQM is one of those Functionalist's tools being used to improve organizational effectiveness and the quality of products. Total Quality Management is a result of the organization's functionalistic perspective of managing its resources to influence its future direction.

Interpretivists study how organization is accomplished and what it means to be organized. They are interested in the organization's shared meanings, its patterns of organization and the changes which have occurred over time. Interpretivists want to explore the actual phenomenon of organization.

Pacanowsky and O'Donnell-Trujillo's (1982) Organizational Culture approach is an interpretive approach which is extremely useful in studying organizational culture. Its collaborative, hands on style allows a researcher to actively experience the culture under study. Their research approach focuses on the process of human interaction which helps a researcher understand how organizational life is accomplished communicatively.

The Organizational Culture approach combined with the use of Circular Questioning as an interview method allows a researcher to acquire a more contextualized and historical picture of an organization by using a technique called double/multiple description. Double description uses a new way of talking, a new way of thinking. It asks an interviewee to answer a question based on the difference between "two somethings." For example "How do you like the new Accord compared to the new Integra?" The "two somethings" are the Accord and the Integra (double, description, circular). This is different from a linear

question in which you would ask "How do you like the new Accords"? (single description, linear).

Answers to the survey questions (linear) asked in the companies' annual surveys presented in Chapter 2 resulted in very little statistically significant data. The data extracted from the surveys provided information about employee's level of satisfaction, effectiveness and TQM by measuring highs and lows (agree/disagree) and more or less (more satisfied/less satisfied).

The answers to the circular questions asked in Chapter 3 provided contextual and historical data that could be used to understand how organizational life is accomplished with the introduction of Total Quality Management.

The circular questions asked in this study on Total Quality Management at Asystems allowed the researcher to delve into employees' interpretations, causes and opinions of the organization in general and TQM in specific. Circular questions allowed the interviewees to respond to their perceptions of the organization's past and present.

Triangulation

Triangulation, as described earlier, is a combination of methodologies, such as surveys and interviews. This convergence allows for the gathering of additional and different information which could not be obtained by using one method alone, such as a survey. This additional

information can be used to portray a more holistic story of an organization under study.

The next few paragraphs will show first the information obtained from the survey at Asystems and then the additional information obtained using Circular Questioning. This triangulation analysis will focus mostly on the area of TQM, since this was the area in which the circular questions focused upon.

As discussed in Chapter 2, the survey revealed few statistically significant opinions about TQM. The trends, however, indicated that management has become less satisfied with the process of TQM from 1991 to 1992. They were less satisfied with the lack of scheduled management/employee discussions, with the progress involved in reducing waste, rework, materials, etc., and with the overall quality of work done in their work groups.

Answers to the circular questions revealed specific opinions about the process of TQM. Management attributed their decline in satisfaction with TQM to the lack of visible results in the last year. One manager believed the initial TQM activities that related to the establishment of policies was constructive, but TQM's current design is a failure (see Appendix D). This information was not obtained from the survey distributed in Chapter 2 and probably could not have been obtained from a linear

questions such as "How do you feel about TQM?" This linear question focuses on how the interviewee is feeling here and now about TQM, not about the current design of TQM verses the initial TQM activities that related to the establishment of policies.

The survey results revealed little statistically significant information about employees' overall satisfaction. However the trends did show that management was becoming less satisfied as employees were becoming more satisfied. Management became less satisfied with the recognition they receive for doing a good job, and more satisfied with their physical working conditions. Employees became more satisfied with how their management handled mistakes, and with the overall job that their supervisor was doing.

Answers to the circular questions gave specific reasons for management's/employees' decrease in satisfaction compared to a year ago, and surprisingly it had nothing to do with TQM. Employees' level of satisfaction dropped due to less challenging work which they believed was due to defense budget cutbacks, lack of growth in a position, low morale, and corporate reorganizations. None of this contextualized information could be obtained using the survey distributed in Chapter 2, or by asking linear questions. Using linear questioning, if an employee was

asked "how satisfied are you with your job?", he may respond, "not very satisfied," and that would be that. Nothing may be said about the large reorganization that took place last year, or that there was a hiring freeze last year which is making it difficult to change jobs within the organization.

The answers to the circular questions took the survey responses one step further. They presented contextual and historical information which the survey or "naturally occurring" questions could not. This is the reason for method triangulation, the multimethod/multitrait research strategy. This form of research shares the conception that qualitative and quantitative methods should be viewed as complementary rather than as rival camps. This allows for convergence of agreement between the two methods presented in Chapters 2 and 3 and can enhance the analysis process of organizational culture research. The information obtained from Circular Questioning can provide a description of organizational life which is generally unavailable in previous organizational culture research. The Functionalist and Interpretivist are historically and presently very good research methodologies. Adding Circular Questioning to this genre could only improve organizational culture research methods and move them into the future.

Future Triangulation Research on TOM

This study was an effort to introduce Circular Questioning into organizational culture research. Quantitative research methods (surveys) were compared and integrated with Pacanowsky et al.'s (1982) Organizational Culture approach with the addition of Circular Questioning.

This study, however, did not compare the three methodological research possibilities; empirical research (surveys), Pacanowsky et al.'s (1982) Organizational Culture approach using "normally occurring" questions, and Pacanowsky et al.'s (1982) Organizational Culture approach using Circular Questioning.

Future research should focus on pushing each research methodology to its fullest. The surveys questions could be designed by the researchers rather than using existing survey data. Another research team could duplicate Pacanowsky et al.'s (1982) Organizational Culture approach using "normally occurring" questions. A third research team could use Pacanowsky et al.'s (1982) Organizational Culture approach with the addition of Circular Questioning.

The results of each research methodology could be analyzed by comparing and combining the research findings in an effort to develop a better understanding of organizational culture change.

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APPENDIX A

APPENDIX A

Corporate Organization

APPENDIX B

APPENDIX B

GENERAL INSTRUCTIONS

When answering the questions, please...

- fill in one circle completely for each question.
- erase cleanly any answer you want to change, and
- make no stray marks.

Skip any question you feel you cannot answer.

Contact your Human Resources Representative if you have any questions about the survey.
Please do not fold the questionnaire.

I. JOB

Your work group includes the people you work with, including your supervisor/manager.
If you are a supervisor/manager, your work group includes your manager and the people who report to you.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1. I like the kind of work I do	①	②	③	④	⑤
2. My job makes good use of my skills and abilities	①	②	③	④	⑤
3. I have enough information to do my job well	①	②	③	④	⑤
4. My work gives me a feeling of personal accomplishment	①	②	③	④	⑤
5. Conditions in my job allow me to be about as productive as I could be	①	②	③	④	⑤
6. I feel encouraged to come up with new and better ways of doing things	①	②	③	④	⑤
7. Employee concerns are addressed when major changes (new processes, equipment, technologies, etc.) are introduced in my work area	①	②	③	④	⑤
8. The amount of work I am expected to do on my job is:					
① Far too much ② Too much ③ About right ④ Too little ⑤ Far too little					
9. How satisfied are you with your physical working conditions?					
① Very Satisfied ② Satisfied ③ Neither Satisfied nor Dissatisfied ④ Dissatisfied ⑤ Very Dissatisfied					
10. Considering everything, how satisfied are you with your job?					
① Very Satisfied ② Satisfied ③ Neither Satisfied nor Dissatisfied ④ Dissatisfied ⑤ Very Dissatisfied					

II. SUPERVISOR/MANAGER

These questions refer to your immediate supervisor/manager, not your lead if you have one.

My Immediate Supervisor/Manager...

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
11. gives me feedback that helps me improve my performance ..	1	2	3	4	5
12. effectively corrects poor performance.....	1	2	3	4	5
13. handles mistakes in a positive manner	1	2	3	4	5
14. discusses with me how I can contribute to meeting the goals and objectives of my work group	1	2	3	4	5
15. explains the relationship between my work group's goals and objectives and the larger organization's goals and objectives ..	1	2	3	4	5
16. helps me solve work-related problems	1	2	3	4	5
17. is available to employees.....	1	2	3	4	5
18. promotes teamwork.....	1	2	3	4	5
19. emphasizes high quality work	1	2	3	4	5
20. treats me fairly	1	2	3	4	5
21. respects confidentiality.....	1	2	3	4	5
22. During the past year, my immediate supervisor/manager and I had a scheduled discussion that helped me improve my work performance	1	2	3	4	5
23. Sufficient effort is made to get the opinions and thinking of people who work here	1	2	3	4	5
24. I am comfortable voicing an opinion that management may not want to hear.....	1	2	3	4	5
	Very Satisfied	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Very Dissatisfied
25. How satisfied are you with the recognition you receive for doing a good job?	1	2	3	4	5
26. How satisfied are you with the information you receive from management on what's going on in the systems	1	2	3	4	5
27. How satisfied are you with your involvement in decisions that affect your work?	1	2	3	4	5
28. Overall, how good a job do you feel is being done by your immediate supervisor/manager?					
1 Very Good 2 Good 3 Fair 4 Poor 5 Very Poor					

III. CCWORKERS

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
29. The people I work with cooperate to get the job done	①	②	③	④	⑤
30. The organizations that I work with in doing my job cooperate to get the job done	①	②	③	④	⑤
31. Employees I work with let each other know if they are not pulling their load	①	②	③	④	⑤
32. Employees tell each other when they do good work	①	②	③	④	⑤
33. Employees new to my work group are well qualified	①	②	③	④	⑤
34. My work group does a good job in onerating new employees	①	②	③	④	⑤

IV. HEALTH AND SAFETY

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
35. My immediate supervisor/manager encourages me to point out possible health and safety problems	①	②	③	④	⑤
36. My management follows through until health and safety problems are fixed	①	②	③	④	⑤
37. I feel safe from accidents on my job	①	②	③	④	⑤
38. I feel safe from health hazards in my work area	①	②	③	④	⑤

V. CONTINUOUS QUALITY IMPROVEMENT

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
39. My work group uses the tools and techniques of Continuous Quality Improvement	①	②	③	④	⑤
40. My work group has taken the time to understand what kind of products/services our internal customer needs	①	②	③	④	⑤
41. I receive excellent products/services from my internal suppliers ..	①	②	③	④	⑤
42. My work group is successful in reducing waste (materials, time, rework, rejections, etc.)	①	②	③	④	⑤
43. I understand how quality is measured in my work group	①	②	③	④	⑤

44. How would you rate the overall quality of work done in your work group?

- ① Very Good ② Good ③ Fair ④ Poor ⑤ Very Poor

VI. TRAINING

- | | Strongly
Agree | Agree | Neither
Agree Nor
Disagree | Disagree | Strongly
Disagree |
|---|-------------------|-------|----------------------------------|----------|----------------------|
| 45. I receive enough company-sponsored training to do my job well . | 1 | 2 | 3 | 4 | 5 |
| 46. I receive enough on-the-job training to do my job well..... | 1 | 2 | 3 | 4 | 5 |
47. How satisfied are you with the training you received for your present job?
- 1 Very Satisfied 2 Satisfied 3 Neither Satisfied nor Dissatisfied 4 Dissatisfied 5 Very Dissatisfied

VII. CAREER DEVELOPMENT

Career development includes such things as growth in one's present job, expansion of professional capability, movement into a different career field, and advancement through one's present career path.

- | | Strongly
Agree | Agree | Neither
Agree Nor
Disagree | Disagree | Strongly
Disagree |
|---|-------------------|-------|----------------------------------|----------|----------------------|
| 48. Guidance for my career growth is available to me | 1 | 2 | 3 | 4 | 5 |
| 49. My supervisor/manager encourages my career development | 1 | 2 | 3 | 4 | 5 |
| 50. I am given a real opportunity to improve my skills
in Asystems | 1 | 2 | 3 | 4 | 5 |
| 51. I get fair consideration for career opportunities..... | 1 | 2 | 3 | 4 | 5 |
| 52. Hiring decisions in my organization are fair | 1 | 2 | 3 | 4 | 5 |
| 53. Promotions in my organization are fair | 1 | 2 | 3 | 4 | 5 |
| 54. In general, I am satisfied with my career progress | 1 | 2 | 3 | 4 | 5 |
55. How satisfied are you with your opportunity to get a better job in Asystems
- 1 Very Satisfied 2 Satisfied 3 Neither Satisfied nor Dissatisfied 4 Dissatisfied 5 Very Dissatisfied

VIII. PAY AND BENEFITS

- | | Very
Good | Good | Fair | Poor | Very
Poor |
|--|--------------|------|------|------|--------------|
| 56. How do you rate the amount of pay you get on your job? | 1 | 2 | 3 | 4 | 5 |
| 57. How do you rate your total benefits program
(Insurance, Medical, etc.)? | 1 | 2 | 3 | 4 | 5 |
58. In this organization people are rewarded according to their job performance.
- 1 Strongly Agree 2 Agree 3 Neither Agree Nor Disagree 4 Disagree 5 Strongly Disagree
59. In comparison with people in similar jobs in other companies, I feel my pay is:
- 1 Much higher 2 Slightly higher 3 About the same 4 Slightly lower 5 Much lower

IX. ETHICS

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
60. I can report unethical practices without fear of reprisal	①	②	③	④	⑤
61. Management will act upon reported unethical practices in a positive manner.....	①	②	③	④	⑤
62. Behavior inconsistent with Asystems ethical standards is not tolerated by members of my work group.....	①	②	③	④	⑤

X. INFORMATION SOURCES

Please indicate how effective the following sources of information are in providing company-related information that is important to you.

	Very Effective	Somewhat Effective	Average Effectiveness	Somewhat Ineffective	Very Ineffective
63. My Immediate Supervisor / Manager	①	②	③	④	⑤
64. My Division Manager.....	①	②	③	④	⑤
65. Bsystems News	①	②	③	④	⑤
66. The Asystems Newsletter	①	②	③	④	⑤
67. Company Grapevine / Rumor Mill	①	②	③	④	⑤

XI. DEFENSE & SPACE GROUP

To what extent do you personally feel part of...

	Completely	Very Much	Somewhat	Slightly	No Part
68. Bsystems	①	②	③	④	⑤
69. Defense & Space Group	①	②	③	④	⑤
70. Bsystems Aerospace & Electronics	①	②	③	④	⑤
71. Asystems	①	②	③	④	⑤

How satisfied are you with the leadership provided by the Defense & Space Group in each of the following?

	Very Satisfied	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Very Dissatisfied
72. Communicating information	①	②	③	④	⑤
73. Coordinating work activities	①	②	③	④	⑤
74. Setting priorities	①	②	③	④	⑤
75. Insuring cooperation and teamwork between divisions	①	②	③	④	⑤

How familiar are you with the Defense & Space Group planning?

	Completely	Very Much	Somewhat	Slightly	Don't Know Anything About It
76. Short-term planning (12 months to 2 years)	①	②	③	④	⑤
77. Long-term planning (3 to 6 years)	①	②	③	④	⑤

XII. OVERALL OPINION

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
78. I see changes taking place as a result of previous employee surveys	①	②	③	④	⑤
79. Asystems is making the changes necessary to compete effectively	①	②	③	④	⑤
80. How do you rate Asystems in providing job security for people like yourself?
 ① Very Good ② Good ③ Fair ④ Poor ⑤ Very Poor
81. How would you rate Asystems as a company to work for compared to other companies?
 ① One of the best ② Above average ③ Average ④ Below average ⑤ One of the worst
82. Considering everything, how would you rate your overall satisfaction in Asystems at the present time?
 ① Very Satisfied ② Satisfied ③ Neither Satisfied nor Dissatisfied ④ Dissatisfied ⑤ Very Dissatisfied

XIII. RESPONDENT CHARACTERISTICS

Nothing will be done with the information below that would ever allow any individual employee to be identified.

What is your payroll? (Choose only one)

- ① Production / Material
- ② Secretarial / Clerical
- ③ Technician
- ④ Engineering
- ⑤ Exempt staff
- ⑥ Other (Please specify) _____

If Management, are you an...

- ① Individual Contributor
- ② First Level Supervisor
- ③ Middle Manager
- ④ Upper Level Manager

In which geographic region do you work?

- ① Sunnyvale
- ② Offsite

Which of the following most closely describes the work you do? (Please fill in only one circle.)

① Contracts	⑧ Human Resources	⑨ Quality Assurance
② Engineering	⑩ Information Services	⑩ Security
③ Facilities	⑪ Production / Materials	⑪ Other
④ Finance	⑫ Publications	

COMMENTS--Please write any comments you would like to make in the space below. Your comments will be typed up exactly as you write them and given to the manager of the organization indicated above.

**Please place your completed questionnaire
in the mail no later than March 15.**

APPENDIX C

[illegible]

11	0.312	-1.122	582	1.645	.376	0.426	68	1.670
12	0.350	-0.658	577	1.645	.295	1.557	67	1.671
13	0.315	-1.240	577	1.645	.433	1.040	68	1.670
14	0.315	-1.240	577	1.645	.433	1.040	68	1.670
15	0.353	-0.850	577	1.645	.337	0.296	67	1.671
16	0.314	-0.414	579	1.645	.246	1.666	69	1.670
17	0.314	-0.542	580	1.645	.255	0.274	69	1.670
18	0.353	-0.595	577	1.645	.386	0.388	69	1.670
19	0.314	-0.574	579	1.645	.331	0.755	69	1.670

41	0.261	0.115	550	1.645	.338	2.220	64	1.671	*						
								.418	-1.364	21	1.721	.098	1.537	593	1.645

[illegible]

INFORMATION SOURCES

OVERALL OPINION

92

TQM QUESTIONS

TQM	1991				1992				mgmt 91/92				empl 91/92			
	M/E		deg of		M/E		deg of		std error		t-test		std error		t-test	
	ERR	t-test	fdm	crit value	ERR	t-test	fdm	crit value	mgmt 91/92	std error	t-test	fdm	empl 91/92	std error	t-test	fdm
7	0.337	-0.801	580	1.645	.415	0.410	68	1.670	.467	-0.964	21	1.721	.130	-0.077	627	1.645
22	0.334	-0.869	573	1.645	.451	0.688	67	1.671	.471	-1.572	22	1.717	.140	-0.997	618	1.645
23	0.353	-0.481	577	1.645	.420	0.714	67	1.671	.467	-0.557	22	1.717	.136	1.547	622	1.645
24	0.334	0.539	578	1.645	.389	-0.232	68	1.670	.449	0.624	22	1.717	.144	0.069	624	1.645
39	0.314	-0.892	556	1.645	.264	2.046	66	1.671	.400	-0.700	21	1.721	.130	4.159	601	1.645
40	0.267	-0.299	557	1.645	.239	1.169	65	1.671	.378	0.238	21	1.721	.102	4.427	601	1.645
42	0.234	-0.939	553	1.645	.244	2.093	65	1.671	.366	-1.722	21	1.721	.111	0.902	597	1.645
43	0.241	-0.790	562	1.645	.366	0.601	67	1.671	.411	-0.535	22	1.717	.135	1.410	607	1.645
44	0.203	-0.739	579	1.645	.261	0.918	69	1.670	.359	-0.529	22	1.717	.100	2.009	626	1.645

APPENDIX D

APPENDIX D

Title: Senior Manager

Years at Company: 8 years

(1) How has your life here at Asystems changed from a year ago to now. Would you say, in the last year, how has it changed?

(2) I would say it's changed because the business climate is more difficult to execute things that you would like to achieve because budgets are tighter and priorities are different. The biggest priority we have today is the acquisition of new business. Things that are more long term like some of the issues we are dealing with in engineering perhaps are put on the back burner or have slowed down because of the lack of budgets.

(1) So how has that changed your life here, are you more busy, are you just changing the focus here at the company?

(2) I'm here at a different job, because of circumstances, but I would say I am doing different things instead of conducting things that are mainstream or engineering aspects of Asystems. Engaged in a fair amount of marketing activity as an example. That is how my life has changed here.

(1) So we're marketing for more business here?

(2) Right.

(1) And that is where you are focusing more on, in this area?

(1) If you were the President of this company, what things here would you like to change. You just took right over. They just handed it to you tomorrow?

(2) I would take the meat ax to some of the overhead.

(1) Overhead?

(2) Yes, and I would, in order to make ourselves this competitive as we possibly could be in the marketplace.

(1) Anything else you might want to change?

(2) I think that uh that we could try to establish better communications between the front office and the operating divisions.

(1) The front office being staff level?

(2) Being Mr. Jones (pseudonym for the President) and building three.

(1) What would you do by doing that, move them closer?

(2) No, I think I'd get out more, see more people.

(1) Ok

(1) How do you feel about Total Quality Management here at Asystems? Truthfully.

(2) I believe it has been a failure for the most part. I believe the initial TQM activities that related to the establishment of systems engineering, and business development, software policies. That was very constructive, but I think the last year or so has been a failure.

(1) And what do you attribute, do you think, the failure to?

(2) I believe that the system that was set up was not, was not one that the engineering organizations believe is worthwhile or fits with there culture. Uh, consistent with priorities that they see should be applied to this type of business.

(1) So you think that it depends on the culture a lot whether..

(2) I believe the current CQI structure has done reasonably well in certain parts of the company that deal with repetitive kinds of operations. It has not done well in the engineering organizations. It has...

(1) Why do you believe that it hasn't done well in engineering, because they're are off wanting to do their own thing?

(2) It's too rigid. It's, it does not allow, it is wasteful of time because every person is supposed to put in one to two hours a week on some issues. A lot of people can't contribute and so if we need to reorganize CQI so that it involves the people who can contribute and over a period of time I think it can be arranged so that everybody can participate, but you don't do that by legislating an hour a week for everybody.

(1) OK, how would you do it, how would, um I mean, if you could how would you rearranged it?

(2) I don't really have the answer to that. We are going through a series of discussions on that very issue right now. Trying to decide how we should change it to make it more effective. One example of what ... is to develop engineering processes and get those established before we start to try to refine the processes, which is what CQI is all about. We have to have a process in place before you can...

(1) Try to improve it?

(2) We need to start at the ground floor.

(1) Uh ha, so we probably should have had some more policies and procedures in place before we started this, because...

(2) Yes, in some areas that's true.

(1) Asystems is a new company, or fairly new as far as new companies are concerned, there wasn't a lot of policies at first. Who do you think in having the most difficulty in this company adjusting to TQM? What level and what type of people?

(2) I think primarily the type of people is primarily engineering people, not exclusively, but from my personal observations those people are struggling and uh, I think it is at all levels. My level on down are struggling. I know I am struggling.

(1) Really, because I remember at the very beginning, way back when, that senior staff just really seemed gung-ho, very gung-ho about it that the rest of us down here were like, heads spinning, so I wasn't, I expected that you guys were all still all gung-ho, but it doesn't. You are having the doubts just like everybody else.

(2) I wasn't a part of senior staff at that time.

(1) Ya, that's true.

(2) ..for starters, and, I think that there were some gung-ho people and there were some skeptics and the skeptics were not very vocal at the time.

(1) Who do you think is having the easiest time adjusting to it right now?

(2) People that are engaged in repetitive kinds of operations.

(1) Uh ha, manufacturing?

(2) Manufacturing people for example.

(1) Um, do you agree with the way that the staff implemented it here at the very beginning?

(2) No

(1) What wasn't... How do you think it should have been implemented?

(2) Well, I, I was put in charge originally of CQI. I set up these functional CAT teams, if you will...

(1) I remember being in one.

(2) ..system engineering, and so forth, and I think that those probably should have been left in place instead of scraping them and starting with this other approach.

(1) Departmental, and everybody involved?

(2) Yes.

(1) Because back then, not everybody was involved, right?

(2) That's correct.

(1) ..in the process, just if they had a stake in it.

(2) That's right, but over time I think everyone would have been involved. Come 1 January when accounting rules change and everyone has to charge overhead for every hour of CQI that they spend, then clearly we will not be able to afford everyone to be involved, every week. It will be the utmost importance to make whatever efforts we spend extremely efficient.

(1) So they are thinking about reworking all of this now for expense purposes in addition to...?

(2) In addition to it not being very effective.

(1) Do you feel you and your coworkers, people at your level, feel the same as you do about TQM, or do you think they are more...?

(2) Some of them do and some of them don't. People that um, are managing operating divisions like CSD feel similar to myself.

People who are more at a staff position maybe don't feel quite too strongly.

(1) What about the overhead type managers, like facilities, the directors responsible for those departments and maybe finance and contracts?

(2) I would have to say that today a great majority of my colleagues feel similarly to myself, which is a significant change.

(1) And your supervisor [laughter, because referring to the current President] Do you and your supervisor feel the same, your manager?

(2) My supervisor, doesn't...

(1) [Laughter] Sorry, this works out well at the lower levels, I hate to ask you this here but,

(2) doesn't let his feelings be entirely known. But I believe that he feels similarly.

(1) Your management has changed over this last year. Right? You have had different managers? Or has it always been the same? You have always report to Del this year?

(2) I have always reported to Mr. Jones.

(1) O.k., or to Mark [psuedonym - retired president], which ever the case.

(2) To both.

(1) Do you feel your relationship with them has been more supportive or changed over this last year?

(2) I don't think it is any different.

(1) Do you feel more satisfied with your work here at Asystems as compared to a year ago?

(2) No

(1) Less satisfied?

(2) I feel it is about the same, I think there are a lot of challenges, the thing that makes things more difficult is the decreased defense budgets, the fact that it is much, much

harder to acquire business, maintain the same kinds of levels of business we have in the past.

(1) O.k., Do you, this is kind of interesting for me at this level because I have sat in a couple of staff meetings; but, do you feel any different about voicing your opinion to your management now as compared maybe to a year ago or two years ago?

(2) I feel it is more essential now than ever.

(1) You do?

(2) Ya.

(1) And you would voice it more now than you would have maybe a couple years ago.

(2) Ya.

(1) Why do you think that is? Because of the atmosphere around here now or the need for it?

(2) Because we have some serious problems and if they are not properly dealt with they will get more serious. So, it's absolutely essential that people speak up.

(1) Have you been encouraged to do that more or do you just feel it is a good idea.

(2) Just do it, it doesn't matter, I feel it's necessary.

(1) Is it encouraged, do you think?

(2) It isn't discouraged.

(1) O.k., Well, that's good. O.k., Believe it or not, that's it.

(2) Hey, that was fun!!

Title: Supervisor

Years at Company: 3 years

(1) How has your life here at Asystems changed from a year ago to now?

(2) Well it has slowed down. In talking about CQI and the QIM process, the workload...

(1) I didn't bring that up. (laughter)

(2) That's what your here for, right? (laughter)

(1) No, your not supposed to know that.

(2) O.k., um...

(1) How has your life changed here?

(2) Work has slowed down.

(1) and why has it slowed down?

(2) Well, the defense cutbacks have had a dramatic affect on our company.

(1) Do you think there is anything else besides those cutbacks?

(2) Well, possibly that we don't have the cutting edge technology that we thought we did, and maybe our products aren't quite as desirable as they were a few years ago. The competition in the marketplace is a little stiffer than it was.

(1) What would you like to change here at Asystems? If you were the President of the company, you could just come in and change anything you want, what would you like to change?

(2) Well, we are an R&D company, and you have a lot of people throughout the company that really fly by the seat of the pants. They are like warlords, running their own little domains, and while that may have been ok a few years ago in an expanding defense market. In cutbacks and trying to be umm improve productivity and streamline our business, we've got a bunch of people running in different directions and I think we need leadership that will pull everybody together and we have to start working under one set of policies and procedure. And now that we have the International Division rolled into DOD,

I think Mr. Smith, to some degree, is trying to do that. But, it's got to happen a lot faster because you can see how fast our business is really going down, or going away.

(1) Who are these warlord you are talking about?

(2) Well you might have like a John Doe's, umm, not-necessarily a ...

(1) He is the manager in manufacturing, how is he a warlord?

(2) Well, he has got his own product line in XXXX's, so he has got a lot of small proposals coming in like Machismo and Opinionist and stuff like that. Um, I don't think we have a problem at the division level with like the V.P.'s and what-used to be Division Mgr and so forth. But we have a lot of underlings that are doing our own thing. That has got us in trouble with Machismo, defective pricing case. I don't know if you want me to go into the details.

(1) Who else would you say, would you consider one of those independent people?

(2) Well, a lot of the international people because they didn't have to march to the same set of principles that we did over here in DOD. And now that they are rolled under our roof as well, they still want to do things the international way.

(1) Which is, what is the international way?

(2) They don't have the documentation on proposals. They don't have proper back-up to support audits or even internal audits, Um, I don't think they have a good way of pricing proposals. They don't have a material costing group over there, so...

(1) What else would you like to change at Asystems, besides the warlords? Come on, you're President!

(2) ..Um I think we could go through and clean house a little bit. Like any company this company is very political. People are either layed-off or promoted many times not because of their business abilities, but because they, ya know, they are friends with someone or they are politically correct. And I have seen a few people go out the door that were very valuable to this company. I think, as President, we need to hold on to the performers, ya know, and we need to get rid of the dead wood.

(1) Buddy system here?

(2) Ya, weed out the dead wood and try to show those people that truly are great credits to the company that they are appreciated.

(1) Anything else you would like to change, Mr. President?

(2) Um, our image. Our image might, if you change those other things, our image might change, but um ...

(1) Our image to the outside world or our image in here?

(2) To the outside world, I think both. And, well, I should speak really to the inside because I don't really know how we present ourselves a lot of times to the outside customers because I am not exposed to that. But, umm, professionalism. I think we have to turn it up a notch. In the way we dress, the way we act, the way we treat other people within the company, the way we respond to them, the way we do our jobs. We just have to turn it up a notch.

(1) What would you think the very most important thing is to change here out of the things you have thought of so far or maybe the things you haven't thought of.

(2) Wow.

(1) (laughter) Think about all of the things you have thought of the last few years, and you thought, God I wish I could change that. What do you think you would really like to change most.

(2) Cleaning house.

(1) Getting rid of the....

(2) ..getting rid of dead wood and promoting those that are performers.

(1) Now I am going to get to the part that you thought I would get to. How do you feel about Total Quality Management at Asystems?

(2) Ok, I'll take that as two parts. Um, I don't think it seems to be working.

(1) Ok. Why?

(2) I'll say that as a broad brush statement, but I'm sure, in pockets, in certain areas, it is.

(1) Why do you feel it isn't working, and where?

(2) Um, well, at where, I think it's all across the company. I've talked to a lot of different people that are involved in QIM's. There's a lot of paperwork involved with QIM's. A lot of monthly reports, statuses, referral documents, charts, and everything else that we have to do. And you know, this hour a week thing is, is ludicrous. I mean you can't do any of this stuff in an hour a week, so it takes a lot longer than that. And, um, it seems like it is really rammed down our throats. And they're forcing, well, a lot of people were going in different directions so they tried to focus us all with that March 16th memo or whatever from the President.

(1) What was that memo?

(2) That said you are going to pick a defect, you are going to go through the following steps, you are going to monitor it, then you are going to close it out.

(1) That memo followed the kickoff meeting that we had at the restaurant?

(2) Oh ya, ya this was March 16th of this year, the restuarant thing was last year. We got things rolling, and then, he is like refocusing us. But, I think a lot of people are spinning their wheels trying to, ya know, you go through this whole cycle where you have to pick a defect and then you monitor it, you analyze it, and then you go through corrective action, then you close it out. You fill out all the forms and then you go through the cycle again for the next one. And we have gone through 3 or 4 iterations of defects. What we put on the defect chart last year, we go back and say "why did we put that on there"? And we just erase it.

(1) Do you feel it has gotten solved or it just wasn't logical at the time?

(2) Ya, it just sort of went away. Time sort of marched beyond it. A lot of the reports you see, in like the Ascenes and everything, are inflated like we save X amount last quarter. Or, based on our projections, we are going to save 1.2 million dollars this year.

(1) And you don't believe that?

(2) NO! No I really don't. And I am sure there are some savings and um you know maybe some of them are accurate but..

(1) Do you believe the metrics aren't realistic or the things that they ask us to measure are possible?

(2) Well, no. I don't think they are. Ya know, we have closed out some defects in our QIM and we are working on some now. But, and I think QIM has done one thing for us, it has got us to think about our jobs a little differently. Well, that's a bonus, but we are spending an awful lot of time on it too. And we are coming up with some good ideas. But, I think they need to look at cost versus benefit. Ya know, ROI, return on investment. Are they getting back what they are really putting into it? And is an R&D company a good base for the type of CQI that we are currently using?

(1) Do you think the company is paying a lot for it, themselves, the company, or the contracts?

(2) Oh ya, I think everybody, I think the cost that Asystems is incurring in trying to get CQI moving is a lot higher than they think.

(1) What are those things that they're spending money on?

(2) Just peoples time trying to everything from filling out the status reports to writing a barrier referral sheet to a cost benefit analysis and everything else.

(1) Do you yourself charge overhead or do you charge contracts?

(2) I charge overhead when I'm working on CQI business.

(1) O.k. Who do you believe is having the most difficulty adjusting to TQM throughout the company?

(2) The most difficult?

(1) Yes.

(2) Probably the people the lower you go in the food chain probably the more difficulty there is.

(1) And what would you consider the lowest in the food chain?

(2) You know, those people that are non-management personnel.

(1) So, O.k., your normal workers around here, your average worker bee.

(2) Because when it starts up at the top everything is theory and delegated and it goes down through the food chain that way and then it gets down to the people in the trenches that are actually carrying out the work and the theories that everything else is, ya know, slowing down.

(1) It is the theory that is implemented downward but aren't your ideas and stuff supposed be implemented upward?

(2) Uh hum.

(1) Are they?

(2) Well, about the only thing, you have this barrier referral sheet. I keep coming back to this, where you get, ya know, we fill out defects and barriers. Well, we've got about, I don't know, 8 to 10 defects and we've got like 20 to 25 barriers. O.k., supposedly things that we can't, we don't have the power ourselves to correct so we have to refer it to the next level QIM and they can address it there. Ok, so you pick one barrier. So we picked one out of 25, o.k? We referred ours in November of last year. I have yet to get a response. This is nine months later. Nine months.

(1) Isn't your management following up on that, or why aren't you getting an answer back.

(2) I don't know, and even I've talked to the next level QIM who did refer it. Even the monthly report that came back out of the TQIT said that, well, we need to address these referral sheets. It's like we've told the people the systems they must use, now they are using it, its like, well, now we've got to get back to them. Ya know, they are using it and they're waiting for a response and we haven't responded to them. But why, I don't know. They are probably busy with the dozen other QIM's they got referral sheets from and they wonder should we address this one or send it back to them. And I heard another QIM within Materiel referred one and it was sent back to them with the statement 'We don't have time to work that right now'.

(1) Really?

(2) Ya. So, ya know, where is their incentive? They go, 'gosh what do we do then', ya know we referred one that we thought was...

(1) Was any more of an explanation provided besides that?

(2) Other than that they said their plate was so full they wouldn't have time to get to it. So they sent it back down. So they did get a response. Probably the same response that I got. They just got it through formal channels. (ha)

(1) So who do you think is having the easiest time with TQM and adjusting to it?

(2) Management, upper management.

(1) O.k. Do you agree with the way the staff at Asystems has implemented TQM?

(2) Staff? You mean senior staff?

(1) Ya.

(2) Ya. I guess, ya. I mean they've tried. They tried to put a good face on it. I think they are committed to it and uh...

(1) Then why do you feel it's just not working?

(2) I guess its the mechanics of the system, from bottom to top. Ya know, bottom the grunt level to the senior management. Just the mechanics and the system..

(1) The mechanics meaning all the paperwork and everything that is involved to get things going.

(2) Ya. The whole process of, ya know, the cycle of quality, to turning in your forms, and getting a response, and um, the mechanics of the system. It's like we've got the parts, and were trying to put together a car and I don't think it's, ya know, it's we are still sort of fumbling to get the thing together. It's not really rolling.

(1) Umm, do you feel you and your coworkers feel the same about TQM?

(2) Well, I'm involved with two QIM's, myself and my direct reports and my director and his direct reports. Um, we are disenchanted in my QIM.

(1) The people who work for you?

(2) Ya. As well as, I am sure, that my attitude pervades the QIM.

(1) But, do you feel the attitudes of your other employees are the same as yours, or do you feel like your shoving it on them?

(2) No, I think, No, a response, I say 'Hey, we've got a QIM' {They respond} 'Oh god, another QIM, I want to die', that type of response. {laughter}

(1) Do you feel you and your supervisor or manager feel the same way about TQM?

(2) I think my manager is committed to the process because of it being an edict from down on high. You shall do this.

(1) Do you feel he feels the same way as you do?

(2) I don't know. I don't know if he feels to the extent I do. But, ya, I think he is somewhat disenchanted with it. Just, ya know, that is a speculation. It's just a feeling I get.

(1) Ya, ya, Just asking for your opinion on it, it's Ok. (laughter) Do you feel your relationship.. {laughter} No, this will go nowhere. Do you feel your relationship with your manager is more supportive now than compared to a year ago?

(2) No.

(1) Same?

(2) Same. No, I mean I've been committed to support him in..

(1) Do you feel he supports you more now than before?

(2) Um, well, I don't think its related to CQI, And you say "oh sure, how can you say that", well..

(1) I'm just asking overall, do you feel more support from them?

(2) No. I mean, but, my manager is now the boss of the department whereas before he was the deputy and I think he was really hamstrung by that. It was like an overnight change when he became, the corner man..

(1) Director?

(2) Director, uh his attitude changed because he was able to make the decisions and he didn't have to answer to anybody except himself.

(1) How did it change?

(2) Well, he was more supportive and he would make decisions and he would make them right away rather than saying "well, I don't know I'm going to have to see how Barbara feels" So ya, he changed but that's why I think it had nothing to do with CQI.

(1) Ok, well ya, I'm not asking as far as CQI, just overall. Do you feel more satisfied with your work here at Asystems more now than a year ago?

(2) No.

(1) Less?

(2) Ya.

(1) And what do you attribute that to?

(2) Um, lack of growth in the position.

(1) Nowhere for you to go in this position?

(2) Well, ya, there is nowhere for me to go in this organization.

(1) Organization, meaning?

(2) Materiel.

(1) Ok.

(2) Um, but when I became supervisor I envisioned the function of a material analyst to... that it would be growing over the next few year from a high paid clerk to more of an analyst. More functional responsibility for Material Costing. But, that hasn't really happened and I don't see it happening and I thought it would up until probably almost a year ago.

(1) Why don't you feel the growth isn't there?

(2) I don't know, the mechanics of the company. Just, everything for a small company the wheels turn awful slow.

(1) Do you feel it has anything to do with the economy or the defense division or defense economy; or, do you feel it is related to the organization itself?

(2) Probably related to the organization. Because change within, ya know, from a function standpoint, I think could take place whether we are moving or withering and I know we've consolidated and redistributed a lot of the people and now that we are shrinking, but the mechanics of this job have not changed at all.

(1) O.k. Do you feel any different about voicing your opinion to management now as compared to a year ago? Do you feel more comfortable voicing it?

(2) Ya, I think maybe I'm a little more open.

(1) Why? Why do you think your more open now?

(2) Maybe because I'm a little more jaded. {Laughter}

(1) Ok, that's all the questions I have. Ta da.

Title: Executive Secretary
Years at Company: Five Years

(1) What things at Asystems would you like to change here if you could, if you were the President, what would you change?

(2) Probably the structure.

(1) What do you mean by the structure?

(2) Job classifications.

(1) Such as, what job classifications?

(2) I just think that there needs to be a reassessment of what classifies people for their job title.

(1) You mean the level of experience or...

(2) The level of experience in combination with their degrees in combination of the actual work that they do.

(1) So that would be more of a human resource type effort?

(2) Ya.

(1) How do you feel about total quality management at Asystems?

(2) {laughter} It's ok, I think it could be more effective with less paperwork and more action.

(1) Um, what less, what paperwork has to be done?

(2) Weekly notes, monthly metrics, tracking, a lot of requirements that are repetitious every month that could be done on probably a quarterly basis.

(1) O.k. Um, what do you feel are the problems regarding TQM besides the actual reporting?.

(2) Low morale.

(1) Low morale, um and what do you think is causing the low morale?

(2) The additional work that...

(1) The paperwork?

(2) Ya. A lot of people at different levels just see it as paperwork, They don't actually see anything good coming out of it because it's on top of their additional, their actual work. And with us being understaffed as we are, its very hard for those people to get that done and to have any respect for it since it is the same thing on a monthly basis because we are so busy with our actual work that we don't have a lot of time to spend correcting the problem. That hour a day was spent correcting a problem..

(1) Hour a week?

(2) Rather hour a week, or whatever, was spent trying to correct the problem rather than having a meeting discussing it again, again, again, it would be much more beneficial.

(1) Umm, so what would be your suggestion as far as changing that?

(2) Go work out on the problem. Have one week a quarter, have everybody, have each member take on a part of that problem to be solved for that month and meet a month later.

(1) So have, like, monthly meetings and then spend the other hour a week working on the actual problem?

(2) Um hum.

(1) O.k. Who do you believe is having the most difficult time adjusting to TQM?

(2) Oh, it's at all levels

(1) Would you be able to rank one more than the other or do you think it is pretty equal?

(2) Its equal.

(1) They are all having difficulty, huh?

(2) Uh hum.

(1) Who do you believe... or are they not having difficulty I guess should I ask. Do you believe there is difficulty with TQM?

(2) Uh hum.

(1) O.k. Who do you believe is having the easiest time adjusting to TQM? Anybody?

(2) {laughter} I can't say that.

(1) Oh, say it. {laughter} It won't go anywhere besides here and the university.

(2) Ya really, and the whole world, but that's ok. No.

(1) Who do you believe is having the easiest time adjusting to TQM?

(2) I would say the people who started it. Umm...

(1) Staff?

(2) Staff.

(1) Uh hum. Ya, O.k. Do you agree with the way in which the staff has implemented TQM at Asystems?

(2) No.

(1) What would you do differently then if you were at the staff level?

(2) Actually they implemented it well by giving us the training courses and making sure everyone went through the training so we did have an overall picture of what the idea was. Umm, I think basically they should have probably spent a little bit more time in recognizing the problems at the company as a whole then putting us in subgroups, not by title or not by department title, but just you people that are related to those problem that are affected most and develop the groups that way than the way they have developed them now in which it's finance versus contracts versus.. We are still separating to much in groups. We are not working as a whole.

(1) So you think the groups should be more, where there is a problem, or where a problem is being seen, you should just combine people who need to work on that problem? Do you think it is necessary to have the weekly meetings by department?

(2) No.

(1) I guess I am not stating this right. Do you and your coworkers feel the same about TQM?

- (2) Oh yes. Some feel worse. Some feel more positive.
- (1) But overall it's ..?
- (2) Probably worse. Shoot the messenger time.
- (1) Worse than you?
- (2) Uh ha.
- (1) O.k. You have a little brighter outlook?
- (2) Uh ha.
- (1) Is that typical in life too?
- (2) Yaa. {laughter}
- (1) I thought so. Do you feel you and your supervisor feel the same about TQM?
- (2) Oh no, he is real positive, he is all the way, gung-ho.
- (1) Real positive guy, huh?
- (2) Uh ha.
- (1) Um, do you feel your relationship with your supervisor is more supportive now as compared to a year ago before the implementation of TQM?
- (2) About the same.
- (1) About the same?
- (2) Uh hu.
- (1) Umm, do you feel more satisfied with your work here at Asystems more now than a year ago?
- (2) Ya. It's diversified.
- (1) It's diversified?
- (2) Uh ha.
- (1) What do attributed that increase, or diversification to?
- (2) Decrease in staff.

(1) And so you have more work to do? There is less executive secretaries or something?

(2) Actually I have increased my workload. I have taken on four managers that I also support a director. So that has increased my workload. But, they've also decreased their staff in which I have taken some of their work on.

(1) Do you feel any different about voicing your opinion to management now as compared to a year ago?

(2) No.

(1) Have you ever had a problem voicing your opinion?

(2) No. {laughter}

(1) {laughter} I didn't think so. That's it for the questions.