

USE OF QUALITY CIRCLES AS A PARTICIPATIVE  
MANAGEMENT INTERVENTION INCREASES JOB  
SATISFACTION AMONG WORKERS,  
REGARDLESS OF AGE

by

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## TABLE OF CONTENTS

	Page
LIST OF TABLES . . . . .	iv
INTRODUCTION . . . . .	1
Chapter	
I. A REVIEW OF RELEVANT MANAGEMENT THEORY . . . . .	6
Maslow's Hierarchy of Needs Theory	
Theory X-Theory Y	
The Two-Factor Theory	
Summary	
II. REVIEW OF THE LITERATURE ON JOB SATISFACTION . . . . .	12
III. JOB SATISFACTION AND AGE . . . . .	17
IV. THE CHANGING NATURE OF THE WORKFORCE . . . . .	20
Stereotypes About Older Workers	
Balanced Assessment	
Implications for Aging	
Summary	
V. QUALITY CIRCLES AS A PARTICIPATIVE INTERVENTION . . . . .	29
Quality Circles Defined	
The Study	
VI. THE EVALUATION PLAN . . . . .	36
Purpose	
Data Collection Methods	
Problems With the Study	
Problems With the Test Instrument	
Problems with Program Maintenance	
Quality Circles, Job Satisfaction, and Age	

Chapter	Page
VII. ANALYSIS OF THE DATA . . . . .	45
Statistical Analysis Using Chi Square Summary of Tables Summary of Chapter	
VIII. CONCLUSIONS AND RECOMMENDATIONS . . . . .	56
Conclusions Recommendations	
BIBLIOGRAPHY . . . . .	65
APPENDIXES . . . . .	71
A. Job Reaction Questionnaire . . . . .	72
B. Instrument Numbers 2 Through 9 . . . . .	79

## LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Pretest Overall Job Satisfaction, Ages 18-29 . . . . .	47
2. Posttest Overall Job Satisfaction, Ages 18-29 . . . . .	47
3. Pretest Overall Job Satisfaction, Ages 30-39 . . . . .	48
4. Posttest Overall Job Satisfaction, Ages 30-39 . . . . .	48
5. Pretest Overall Job Satisfaction, Ages 40-49 . . . . .	50
6. Posttest Overall Job Satisfaction, Ages 40-49 . . . . .	50
7. Pretest Overall Job Satisfaction, Ages 50-59 . . . . .	51
8. Posttest Overall Job Satisfaction, Ages 50-59 . . . . .	51
9. Pretest Overall Job Satisfaction, Age 60> . . . . .	52
10. Posttest Overall Job Satisfaction, Age 60> . . . . .	52

## INTRODUCTION

In recent years there has been considerable discussion about changes in the American labor market. Three particular themes have been topics of much of the discussion: participation by employees in decision making, job satisfaction among workers, and the aging of the workforce. The objective of this thesis is to examine these themes and to explore their relationship. Conclusions and recommendations will be offered based on a review of the literature as well as analysis of an actual situation in which all three of these subjects were relevant.

The first theme is the perceived need for participative approaches by management as a means of increasing employee involvement in decision-making that affects their jobs. One participative management approach that has surfaced in the United States in recent years is built around the concept of small groups of employees who use a structured set of problem-solving techniques to increase their workplace involvement. These groups are called quality circles. Whether or not this particular approach to participative management is transferable intact from the Japanese, who implemented the idea with American help after World War II, is still a matter of debate centering on cultural constraints that some believe

could inhibit American worker commitment. Attempts at installing participative methods have been made with varying results by such well-known American companies as Westinghouse, Hewlett-Packard, IBM, and Ford Motor Company, to name only a few. Increasingly, joint ventures between Japanese and American companies result in Japanese purchase of existing American companies, or to their building of Japanese-owned plants in America. With these joint ventures come the installation of Japanese work principles through training of American workers in Japanese values and methods. Initial evaluation seems to indicate that no significant problems have surfaced. Considering the brief period that has elapsed since the initial application of this concept in the United States, more time and study may be needed for a truly valid judgment to be made.

One significant area where impact of new management techniques can be demonstrated almost immediately is on the job satisfaction of the workers. This is the second consideration about worker involvement. Worker job satisfaction as the subject of years of study has raised a variety of questions. Is it the job that satisfies? The person who is intrinsically satisfied? The pay? The supervision? The communication among workers and management? Theories abound, and even today there is no primary theory accepted by everyone. Job satisfaction may be



different at different stages in worker development. Some research indicates that as education increases, workers become less satisfied. It would be spurious, however, to assume that education decreases satisfaction. Perhaps education increases the need for different approaches to a job. Routines may become less challenging for instance, or top-down decision making may result in more questioning of the decision by the employee. As workers move up the organizational ladder, they also gather more information that could contribute to their ability to become effective decision makers. The organization's failure to access this ability could lead to a decrease in job satisfaction for the worker, or even possibly to an increase in existing job dissatisfaction. Questioning of the developmental stages of workers and factors that affect their job satisfaction provides the background for emergence of another factor that is the third consideration to surface in recent years--age.

Changing demographics project statistics showing that the American workforce is becoming increasingly middle-aged. While medical advances are increasing longevity through eradication or control of disease, technological advances are decreasing labor intensity in many jobs. A decline in fertility has resulted in a slowing of the birth rate coupled with evidence of increased entry of women into the workforce. Information

about aging itself has demystified normal aging as opposed to pathological aging. It is clear that there is a growing realization that the repercussions of these advances and changes are being experienced today through an impact on the composition of the traditional workforce. Predictions are that, as soon as the year 2000, it is likely there will be fewer younger workers available to enter the labor force.

Does this projection imply that middle-aged and older people, who in other times may have been preparing to exit the workforce, will be needed to maintain normal business activity? The rise in the number of employed women, more educated workers, increased good health combined with increased longevity, and a threat of continuing inflation all may point to a desire and/or necessity for workers of all ages to remain employed as long as they can. With change occurring over such a widespread spectrum, it is unlikely that it will not also have an impact on the way businesses respond to their workers. Antiquated methods of management, acceptable at a different time, under different conditions, undoubtedly will not be appropriate.

This thesis examines the three considerations mentioned previously and explores the question of whether participative management approaches, such as quality circles, can impact job satisfaction, and whether the age

of the worker has any influence on the outcome. It is organized as follows:

Chapter I discusses several theories of management that provide the foundation of today's American approach to management. Chapter II explores specific research in the area of job satisfaction in an attempt to provide background for subsequent chapters. Chapter III reviews the literature on job satisfaction as it is affected by age.

Chapter IV considers emerging demographic trends by exploring both the stereotypes about aging and the implications of aging for the future workforce. Current theory about the need for participation by future workers in decision making is also presented. Chapter V offers the concept of quality circles as an intervention strategy that facilitates participative management and describes a pilot quality circle program conducted at a large West Coast hospital. Chapter VI describes the evaluation model used in this study and reports the problems experienced in conducting the evaluation. Chapter VII reports the findings and Chapter VIII contains conclusions drawn from the analysis of the secondary data used in the study. Recommendations are offered in this section for others interested in further inquiry and implementation of quality circles.

## CHAPTER I

### A REVIEW OF RELEVANT MANAGEMENT THEORY

Over the past 30 years, a number of theories of management have been developed in an attempt to understand work and workers. These theories have evolved into a perspective of participation as a primary vehicle through which both the American worker and American enterprise can benefit. This is a major theme for this thesis and is presented as background information upon which the thesis is developed. This chapter looks at theories of Abraham Maslow, Douglas McGregor, and Frederick Herzberg, and follows the evolution of theories ascribed to by management in an attempt to unfold a sequential pattern that leads to current implications and applications of the ideas.

#### Maslow's Hierarchy of Needs Theory

Abraham Maslow (1943) suggests that there exists in humans a hierarchy of needs that must be satisfied in sequence before a person can reach an ultimate state of self-actualization. Maslow's basic assumption is that motivation is a state of internal motive that prompts the

individual to action. According to Maslow, motivation comes from within and cannot be imposed upon an individual from external sources.

Maslow's theory of a needs hierarchy begins with the basic need of survival followed in ascending order by safety and security needs, social needs, ego or self-esteem needs, and finally reaching an ultimate goal of self-actualization. To quote Maslow:

It is quite true that man lives by bread alone--when there is no bread. But what happens to man's desire when there is plenty of bread and when his belly is chronically filled? At once, other (and "higher") needs emerge and these, rather than physiological hungers, dominate the organism. And when these in turn are satisfied, again new (and still "higher") needs emerge and so on. This is what we mean by saying that the basic human needs are organized into a hierarchy of relative prepotency. (p. 374)

Maslow's theory, therefore, suggests that individuals cannot satisfy higher order needs until those of the lower order are satisfied. Once fulfilled, the lower needs no longer are important. They are satisfied and, therefore, not motivators. The individual then moves on to a higher plateau, or higher order need. Although Maslow's idea is not based upon actual research but on inductive reasoning, it has provided a framework for organizational development for many years. The message to management implicit in Maslow's theory is that organizations should be aware of the already satisfied needs of

their employees and focus on emerging needs as a means of increasing worker satisfaction.

#### Theory X-Theory Y

Douglas Murray McGregor's (1957) Theory X-Theory Y approach suggests that there are two types of managers. The Theory X outlook is a pessimistic view of humanity in which managers tend to believe that people are inherently lazy and will not work unless they are forced to do so. On the other hand, Theory Y managers are in direct contrast and begin with the premise that workers will perform at a higher level if they are treated well and allowed to experience personal satisfaction in the execution of their jobs. It is important to recognize that these are assumptions only and are not meant to be accepted as prescriptions for managerial strategies. McGregor's theory, like Maslow's (1943), is the product of inductive reasoning and not based on systematic research.

In analyzing the McGregor theory, Koontz, O'Donnell, and Weihrich (1980) point out that Theory Y assumes that leadership is participative, flexible, and adaptable to the needs of the particular enterprise. The emphasis is on teamwork and using the talents of group members. According to Koontz et al., McGregor cautions that some managers may use the participative approach

merely to give workers a "sense of participation" that actually is a facade to mask some basic dishonesty or hidden motives. McGregor's reasoning suggests that workers be involved with problems and issues that have meaning for them. He believes that people are capable of creativity, self-control, and integration of their goals with those of the organization but he also cautions that this does not necessarily mean that commitment and involvement will automatically follow.

#### The Two-Factor Theory

In 1959, the two-factor (Motivation-Hygiene) theory emerged from research conducted by Frederick Herzberg, Bernard Mausner, and Barbara Bloch Snyderman. According to this theory, it cannot be presumed that the opposite of job satisfaction is job dissatisfaction. It is, in fact, no satisfaction. According to this research, satisfaction and dissatisfaction are discrete feelings and not polar extremes on a continuum. Satisfiers analyzed and classified by Herzberg were achievement, recognition, work itself, responsibility, advancement and growth. Dissatisfiers were company policy and administration, supervision, working conditions, interpersonal relations with superiors, subordinates and peers, salary, status, job security and personal life.

As part of this study, frequency factors were run on the various facets. The most frequently mentioned factor was achievement as a favorable job attitude followed by recognition, work itself, responsibility, advancement, salary, possibility of growth, interpersonal relations--subordinate, status, interpersonal relations--superior, interpersonal relations--peers, supervision-technical, company policy and administration, working conditions, personal life, and job security. When considering both the frequency and duration of effects on attitudes, three factors stand out strongly as major factors involved in producing high job attitudes. They are work itself, responsibility, and advancement, and they rarely appeared as factors that produced poor job attitudes. Company policy and administration, supervision (both technical and interpersonal relationships), and working conditions, however, represented the major job dissatisfiers. There is little indication that these factors would influence job attitudes in a positive direction.

#### Summary

Two of the basic theories upon which today's management techniques are founded are Maslow's (1943) hierarchy of needs and McGregor's (1957) Theory X-Theory Y. Both of these are inductive theories not based upon actual



research. Maslow looks at the person and follows the psychological development from basic needs through self-actualization. McGregor looks at self-actualized people (managers) and examines their perceptions of the people who work for them in an attempt to develop an understanding of the conditions under which a person can be self-actualized. His ultimate thrust is one that suggests teamwork as the way in which management must move. McGregor also says that it is not to be assumed that presence of a teamwork concept leads directly to commitment and involvement. Herzberg et al. delve further to find the precipitators of worker commitment and job satisfaction. They suggest a number of possibilities and label them job satisfiers and job dissatisfiers.

This information provides the basis for further discussion of job satisfaction and factors that influence it. This is the subject of Chapter II.

CHAPTER II  
REVIEW OF THE LITERATURE ON  
JOB SATISFACTION

Chapter I has focused on several ideas about management that may lead to an understanding of workers themselves and the factors that motivate them to do their jobs. It is important to point out here that unless specifically noted, no distinction is presumed between managers and workers since the manager, in this thesis, is also presumed to be a worker. A review of the literature provides additional information on research into job satisfaction and the factors that influence it.

Hackman and Lawler (1971) offer in their findings that employees generally want skill, variety, task identity, task significance, autonomy, and feedback. Oldham, Hackman, and Pearce (1976) follow with their results that show that workers perform better and are more satisfied if a certain number of "core attributes" are perceived as available in a particular job. Conversely, the congruence model of Phillips, Barrett, and Rush (1978) assumes no "core attributes" common to all tasks and suggests that a job need not necessarily possess

high levels of attributes congruent with the preferences of the employee.

Chris Argyris (1974), a psychologist, argues that a basic conflict exists between the demands of the organization and the mature human personality. Argyris believes that the structure, process, and procedures of an organization make workers dependent children rather than independent adults. He contrasts individuals to organizations by concluding that individuals demand freedom and organizations by their very nature seek to control behavior. Organizations, according to Argyris, encourage passivity rather than activity and they demand only infrequent use of an individual's talents.

Argyris notes that modern society has strong self-actualization needs but contends that the modern organization not only fails to recognize these higher level needs but may actually impede workers from realizing their personal needs. Argyris states that workers cannot be motivated; they are by nature motivated. The problem for the company is the direction and form the motivation takes.

Seashore (1974) adds to the study of job satisfaction by linking the person to the environment in a fit that results in increased job satisfaction by a change in the person through acquisition of skills, qualities, and

attributes required by the environment. He further suggests that individuals may modify their expectations and aspirations, or adjust their goals, making them more consistent with objective realities.

Wanous (1978) suggests that a match between individual needs and reinforcers offered by the organization results in job satisfaction and organizational commitment.

Research findings of Rensis Likert (1967), a social psychologist most known for his "Likert Type Sacle," lead to the conclusion that most organizations use very little of the potential available to them through their people. Likert advocates the "group theory" of organization where the head of the department deals with the employees collectively and, consequently, responsibility and accountability occurs in terms of the group as a whole. The functioning of the group in terms of effectiveness or ineffectiveness is dependent upon the quality of the communication within the group. Likert believes that the human assets of the company are the most important factors to be considered.

Blauner (1966) also believes that higher levels of job satisfaction result from greater integration of work teams on the job. His findings further support his belief that a major effort must be made to increase the areas of

control employees can have over their work process, especially in industries where control is at a minimum.

Chapter II gives the results of various studies that attempt to develop one main theory of job satisfaction. It is evident that some of the findings are contradictory. For example, core attributes important to worker job satisfaction are necessary to the job in studies by Oldham et al. (1976), yet non-existent in studies by Phillips et al. (1978) only two years later. Argyris (1974) faults not the job but the organizational structure as the reason workers are dissatisfied. Seashore (1974), on the other hand, says it is the person/environment fit that leads to increased job satisfaction. While Wanous (1978) goes one step further and ties worker needs to organizational reinforcers to produce job satisfaction, Likert (1967) expands beyond the job and the organization to the overall effectiveness of the quality of communication between the organization and the individual. Blauner (1966) tightens the focus by suggesting that participative approaches are necessary to employer/worker relationships.

The general theme that results from the evolution and expansion of theories is that both the organization and the individuals are important considerations in worker/employer relations. It can be concluded that there is general acceptance of the idea that a participative

environment is necessary for both workers and management to be satisfied. If that is the case, and evidence about the changing nature of the workforce in terms of age, sex, education, etc., is accurate, it is necessary to review these ideas in light of demographic projections.

Chapter III addresses these issues.

## CHAPTER III

## JOB SATISFACTION AND AGE

Chapter III explores the relationship between age and job satisfaction in an attempt to determine whether job satisfaction is influenced by the age of the worker. Although other variables, such as sex and education, are also important to consider, it is beyond the scope of this thesis to address them.

A review of the literature provides several studies that demonstrate the positive relationship between age and job satisfaction (Glenn, Taylor, & Weaver, 1977), however, the results are inconclusive because of intervening variables (Phillips et al., 1978). There appear to be consistent positive relationships among satisfaction, absenteeism, and turnover (Porter & Steers, 1973), but these studies fail in their effort to explain precipitators of satisfaction. Gibson and Klein (1970) show that age and work satisfaction are positively related even when controlling for tenure but a later study by the U.S. Department of Labor (1970) reports that it is not possible to link this dissatisfaction with an

effort by the employee to relocate or to acquire additional skills that would lead to a more satisfying job.

The majority of research related to age and job satisfaction has conceptualized satisfaction in an overall global sense (Muchinsky, 1978), that is, job satisfaction in general without regard to influencing factors. One early study by Herzberg, Mausner, Peterson, and Capwell (1957), however, shows a u-shaped relationship between age and job satisfaction indicating a downward movement in job satisfaction during the middle years and a return to higher levels of job satisfaction prior to retirement. In 1970, Carroll summarized several studies reporting that people have a high level of satisfaction when they begin working, become increasingly dissatisfied for a number of years, and then experience an increase in satisfaction steadily over the balance of their working lives.

More recent studies have focused on the facts of job satisfaction. The Hunt and Saul (1975) study of age and job facet satisfaction reports that the relationship is primarily a function of the facet being studied. Positive and negative as well as linear and non-linear relationships exist for different facets. Sex differences are present in the relationship between age and tenure, and job satisfaction. According to Hunt and Saul, among females age is not a significant predictor of job



satisfaction but tenure is. Among males, both age and tenure are positively associated with job satisfaction although age is slightly stronger in influence. Weaver's 1978 study contrasts with Hunt and Saul's 1975 study in that no sex-related differences in the age-satisfaction relationship are found.

Muchinsky (1978) reports the existence of considerable divergence in the literature and offers the suggestion that if one considers chronological age as a poor indicator of psychomotor ability, it is equally plausible that chronological age is a poor method for inferring attitudinal states. It is possible, then, that any attempt to prove a linear relationship between age and job satisfaction is futile. This suggests the rationale for so much inconsistency in the literature.

Some research reports tie age to positive job satisfaction. Others say that age is not the only factor; tenure is also important. Still others say that age may be a factor in job satisfaction but it is best studied in conjunction with facets of the job held by the person being studied. Not only do the facets impact the satisfaction but sex of the worker may also be significant. The significance of sex as a factor is challenged as well as the significance of age. The literature fails to provide conclusive evidence of the existence of a relationship between age and job satisfaction.

CHAPTER IV  
THE CHANGING NATURE OF  
THE WORKFORCE

Chapter III provided information on research that attempted to relate age to job satisfaction. The significance of the relational aspects of these two factors is evident as Chapter IV explores information that indicates that the American labor force is facing a period of dramatic change in its composition. A number of factors combine to create a profile of a worker in the 21st century who will be different from any profile drawn to date in our history. The coming decades will bring a worker who is more skilled, with a heightened awareness of personal health, a different orientation to life and job, and most importantly, this worker will be older (Humple & Lyons, 1983).

The changing age of the workforce is documented by reports of the U.S. Bureau of Labor statistics. Decreased fertility rates, due primarily to the drop in births between 1965 and 1975, are expected to result in fewer younger workers entering the workplace by the year 2000. In fact, this has already begun to surface

(Coberly, 1982). There is speculation that the trend toward low fertility could continue as late as 2040 (Treas, 1981). At the same time, increased longevity and improved health status are expected to provide the United States with the highest percentage of older persons this country has known in recorded history (U.S. Bureau of the Census, 1981).

The new worker has already begun to emerge. With advanced technology, longer years of schooling, and rising affluence, workers are becoming independent and asserting their individuality (Jain, 1980). Because they are rights conscious, they have higher expectations for participation in workplace decisions than did their predecessors (O'Toole, 1981). Workers who are older, better educated, and higher paid feel they should have more influence on all decisions affecting them (Lawler, 1981). The question to be asked is "Will they be allowed to have that influence and, if so, how will they exert it?"

#### Stereotypes About Older Workers

It is quite apparent from the literature that perceptions about the abilities of older workers are long-standing, negative perceptions. In addition these perceptions have been accepted, not only by management, but by rank and file workers themselves. Weatherbee

(1969), while listing many superlatives about older worker abilities, concludes his research by stating that older workers "on the other hand show inflexibility, even ossification, in their attitudes. Old habits, mistakes, and unresolved problems interfere with solving new problems." He also states that they learn how to negotiate a favorable outcome between contribution and compensation; that is, "they outsmart the system, taking more out of it than they put in." Weatherbee notes as well that older workers are usually less educated and have less training. On behalf of younger workers, he lists factors in favor of their employment such as: energy, speed, curiosity, independence of judgment, sound educational background, more independence, more mobility, and less rigidity.

More recent literature shows that the older worker is frequently perceived to be lacking in creativity, less able to cope with stress (Rosen & Jerdee, 1977) and lower in performance (Britton & Thomas, 1973; Rosen & Jerdee, 1977). Some perceive older workers to be less interested in developing (Rosen & Jerdee, 1976a), and more difficult to train (Britton & Thomas, 1973). A close look at some of the early studies is in order to sort out the real from the stereotypical images of workers as they age.

### Balanced Assessment

Baughner (1978) notes that although previous laboratory testing did show declines in cognitive tasks in health workers over 65, it does not necessarily follow that the older employee's job performance reflects the difference. He states that relatively simple changes in job design or training situations can bring these tasks within the capacity of the older worker if there are difficulties. Baughner also shows that age-related personality changes, such as depression and adaptability, are subject to intervention by the employer. Taylor's (1975) findings indicate that older managers may take longer to make a decision but they seek greater amounts of information before making that decision. In exploring the relationship between job satisfaction and job performance, Paul (1983) was able to produce only a few research studies comparing job performance of young and older workers and those that were available report no significant differences in age groups.

Considerable effort has been expended to validate early research on aging and findings show conclusively that the reason for such negative outcomes in many of the earlier studies is the failure of the researchers to take into account generational differences (Schaie & Labouvie-Vief, 1974). Subsequent longitudinal studies with simultaneous testing of several age groups at successive

points in time suggest that each successive generation performs at a higher level on several tests of intellectual ability. Studies conducted by Glenn et al. (1977) show that even when measuring job satisfaction, differences reported can be cohort effects rather than those associated with aging. They cite the fact that as one ages, one does not experience a decrease in education, for example.

#### Implications for Aging

Aging is a highly individual phenomenon. It is accepted that all systems of the body do not age at the same rate or in the same way in all people (Ebersole & Hess, 1981). This is also true of motivational needs, which vary from person to person. Before implementing any type of intervention, management must understand the types of people they employ and then try to implement motivational programs that will fulfill not only the company's needs but workers' as well (Ingle, 1982). Some people may not wish to have enriched jobs or those that increase their participation, for instance. If this is so, any attempt to involve them beyond their perceived jobs could result in a decrease rather than an increase in satisfaction because of the discrepancy between what is being offered and what is preferred (Forbes, Barrett, Alexander, & Phillips, 1976). The implications of this information

lead to a need for managers to be aware that there are no tactics or techniques that are more appropriate for one age group in comparison to another. What is clear from the literature is that the best predictors of future attitudes and behaviors of a cohort are the current attitudes and behaviors of that cohort (Doering, Rhodes, & Schuster, 1983). This could be significant information for long-range human resource planning.

Findings of Mohrman and Lawler (1984) tell more about what to expect about the changing workforce. Knowledge workers, high tech workers and service organization workers typically have higher educational levels and different expectations about how they are going to be treated in the workplace. It becomes important, then, to find ways to tap into the motivational level of these employees and the way to do that appears to affect the important needs of the individual (Lawler & Ledford, 1981). This may, in fact, take the process of understanding workers' job satisfaction full circle from Maslow's (1943) needs hierarchy through various other theories and back again to Maslow. Lawler (1981) addresses the idea of individual needs in terms of age and shows that older, better educated, and higher paid employees feel that they should have more influence in workplace decisions. He cautions that the failure by management to use the intellectual power of older adults

as well as their physical power is a severe waste of valuable and expensive resources. Mohrman and Lawler (1984) conclude that as the workforce described above becomes older, and enlightened management begins to do away with myths about older workers, former "top down" management styles designed to dictate to workers may need to be replaced by more participative approaches.

Recent information on participative interventions (such as quality circles) that affect the quality of work life of employees seems to indicate the programs are consistent with values of the new worker. According to Cammann and Ledford (1982), in addition to including workers in decision making, these programs permit employees to grow, to learn, to accept responsibility, and to develop skills in the course of helping to solve workplace problems. Participation means actual involvement by the employees in the management process. Inclusion merely through representatives, according to Cohen (1977), can foster alienation through gaps between what is expected of the representatives and their actual responsiveness. Cohen elaborates:

Participative management means that workers are enabled to control the aspects of work intimately affecting their lives. It permits the worker to achieve and maintain a sense of personal worth and importance, to grow, to motivate self and to receive recognition and approval for what he does. (p. 142)



Lawler (1983) interjects an interesting "if" question that hits at the very heart of much management discussion today--productivity. Lawler queries that although participative approaches are the wave of the 1980s, if increased productivity is the emphasis of such programs, there are enough failures around to counter any success stories. Therefore, he contends that a trend towards greater use of these interventions is not clear and "the jury is still out" regarding citing employee involvement as the primary management approach of the 1980s and beyond.

#### Summary

The literature leans heavily towards the idea that participation is, in fact, important to job satisfaction of workers regardless of age but it may be influenced more by other variables such as education, for instance. Providing workers with a meaningful voice in the decision-making process can result in immediate feedback to the employees that in turn fosters a democratic environment.

This thesis does not presume that productivity is the only measure of positive outcomes to be achieved through participative management interventions. Its purpose is to consider whether there is a correlation between job satisfaction and age and, therefore, focuses on whether or not installation of one type of participa-

tive intervention, quality circles, affects job satisfaction among workers, controlling for age. The next chapter looks at the concept of quality circles and defines them in terms of their origin and objectives. The pilot program in which the quality circles were studied is also described.

CHAPTER V  
QUALITY CIRCLES AS A PARTICIPATIVE  
INTERVENTION

The quality circles concept is the result of an innovative approach by an American statistician, W. Edwards Deming. Deming took his methods on producing goods of high quality and at low cost to Japan as part of an American effort to rebuild that country after the devastation of World War II. According to the literature, Deming offered these same methods to the Americans who accepted the statistical framework but not the process. The Japanese adopted both but focused on the process. Deming has been called the "father of quality control" by the Japanese. His methods taught the Japanese that higher quality meant lower cost (Tribus, 1983). According to Deming, 85 percent of the problems in the workplace are with the system and only about 15 percent are with the worker. Using Deming's approach and understanding this reality, Japanese workers are free to speak up without fear of management reprisal. They accept that it is their responsibility to do the work within the system and that it is the manager's responsibility to improve the system.

This natural division of labor enhances the interaction in the Japanese workplace improving quality and, therefore, productivity.

#### Quality Circles Defined

Before continuing it is helpful to provide at this point some detailed information about what quality circles are and how they function.

Quality circles are groups of six to ten employees from the same work area who meet voluntarily once each week for one hour on company time to discuss problems directly related to their work, investigate causes, and recommend solutions that will ultimately improve productivity, quality, and work environment. Quality circles do not handle problems such as grievances or demands. They do not allow power struggles since all decisions are made by consensus. They also do not deal with company policy. Donald Dewar (1980), an internationally recognized expert on quality circles, notes that the key to quality circles is participative management and this should be encouraged from the top to the bottom of every organization if the concept is to survive.

The objectives of the quality circles (Henerson & Costa, 1982) in the pilot study that is the focus of this chapter are:

1. To encourage members to work as a team and create an open problem-solving environment.
2. To provide a vehicle for worker and supervisory training.
3. To improve on-the-job communication and have more collaboration between interdependent persons and groups.
4. To teach employees to solve problems, not just to identify them.
5. To get people fully "involved" in their work.
6. To make the rewards of the job come from the work itself.
7. To reduce job conflicts and road-blocks.
8. To improve product quality and cost awareness.
9. To develop a people-building philosophy.
10. To meet quality circle objectives with no change in organizational structure.
11. To improve productivity. (p. 5)

Next, we will look at a pilot quality circle program installed in a Southern California hospital and evaluate its potential for effectiveness given what we know about the workforce of the future.

#### The Study

This study was undertaken at a large West Coast hospital that had implemented a quality circle pilot program. One of the main questions this organization wanted to answer was whether or not the implementation of quality circles could increase job satisfaction of participants in a circle. A six-month pilot program was approved by the Human Resources Committee of the Board of Directors of the hospital in September 1982 and installation of the program began in February 1983.

Considering demographic trends as well as projections about the changing American worker, a concurrent secondary analysis of the data was undertaken to look at implementation of this participative intervention while controlling for age of the worker. The writer was not instrumental in the original program implementation or the research design for the evaluation, but did assist in the day-to-day operation of the circles and their final evaluation by providing support to the two coordinators of the program. The information that follows is used with their permission.

Installation of the program consisted of the following:

1. Half-day seminar for executive management.
2. Selection of quality circle advisory committee members.
3. Advisory committee development of program objectives and mission statement.
4. Two-day workshops for managers.
5. Three-day workshops for first-line supervisors considered for circle leadership.
6. Orientation of line employees of supervisors volunteering to participate in the pilot program.
7. Identification of pilot circles.

In conjunction with the voluntary nature of the program, participation in the pilot depended upon a demonstration of interest from the entire line management of a work unit, beginning with the Vice President and culminating with the first-line supervisor. In one instance, a department was unable to form a circle even with the commitment of the management chain. The employees in that particular work unit did not choose to volunteer (or even attend the initial orientation program). In another situation, a leader was selected by his department, trained, and fired the day after training was completed. Although six circles were planned for the pilot, only five circles were in fact recruited.

#### Functioning of the Circles

The first circle meetings were held the week of June 6, 1983. Thereafter, the circles met regularly for one hour a week under the direction of the circle leader and facilitators. Leaders in quality circles are the natural supervisors of the work group and facilitators are generally from outside the work group. Leaders have primary responsibility for running the group while facilitators are responsible for assuring that the group process techniques learned by the leaders are maintained in order to insure that all members of the

circle have equal opportunity to participate during a meeting.

Until the end of the pilot evaluation period on January 15, 1984, the following meetings occurred:

1. Bi-monthly facilitator leader meetings
2. Two leader/facilitator meetings
3. Advisory Committee meetings on an as needed basis.

These meetings were held not only to disseminate information but to serve as a support group for the various people involved in the circle process.

#### The Mission Statement

In order to capture the true flavor of the expressed intent of the organization and the Advisory Committee in implementing the quality circles pilot program, it is helpful to know the content of the mission statement, which is

In an organization the size of and complexity of this hospital, it is important that critical needs be met--those of the organization and of the employees.

To fulfill its obligations to the Los Angeles community, this hospital needs each and every employee's commitment to a common goal: providing the best possible patient care in a cost-effective manner. Meeting the needs of the employees enhances the organizations' possibility of achieving that commitment which it seeks. Employees are valued as capable human beings who with the proper tools can be counted upon to work with one another toward that common goal, to assume responsibility



for their actions, and to seek out ways of improving the quality of service they provide, thereby actively contributing to the achievement of the common goal.

Quality circles have been identified as a results-oriented approach that addresses and integrates the needs described above, and as a vehicle for implementing the institution's commitment to participatory management.

The purpose of this committee is to oversee the installation of pilot quality circles at the hospital, and to insure that the project has the support needed to obtain measurable outcomes (improvements) in the areas of:

1. Staff morale
2. Cost effectiveness
3. Inter- and intra-departmental communication
4. Quality of service
5. Quality of product
6. Quality of work life

Every effort was made by the Advisory Committee to cover all aspects of quality circle implementation, process, and support necessary to guarantee effectiveness of the program. They further resolved to conduct a formal evaluation of the implementation effort with the intention of providing positive proof of the significance of this type of intervention in improving the organizational climate.

## CHAPTER VI

## THE EVALUATION PLAN

This section examines the overall plan for evaluation of the program and defines one instrument used for evaluation of the project. The problems with the implementation and evaluation also are outlined in detail.

Purpose

The major purpose of the evaluation was to assess the quality circle process and provide recommendations to the Human Resources Committee of the Board of Directors. This committee had approved the project as a six-month pilot effort, the results of which would be studied so that an informed decision could be made whether to expand the program throughout the hospital. The questions to be addressed by the evaluation were identified by the Advisory Committee at the beginning of the pilot. Primarily, they wanted to know if the circles had functioned as they should have as measured by regular meetings, good attendance, appropriate leadership and facilitation, and what impact the circles had on the following areas: job satisfaction, job performance, management skills, communication, personal development, and productivity (as

defined by cost savings/avoidance or changes in procedures). A number of other questions also were to be answered by the evaluation. It is beyond the scope of this thesis to address all of the questions and, therefore, it concentrates only on the measurement of job satisfaction.

#### Data Collection Methods

A number of instruments were used in the evaluation of the quality circle impact. They were either designed in-house for this purpose or adapted from instruments used by other companies in their quality circles program. In addition to the data gathered through these instruments, information was obtained from an analysis of quality circle meeting minutes. Summaries of some of the data collected are included in this document where appropriate. Descriptions of the various instruments are included in the Appendixes.

In order to make the amount of information available more manageable, this thesis addresses only the results of instrument number one: Job Reaction Questionnaire as cited below. However, the entire questionnaire is reproduced in Appendix A.

#### Purpose

To obtain a group measure of attitudinal change that may occur as a result of quality circles.

Categories of Evaluation

Job satisfaction.

Groups and Numbers Reporting

Quality circle members (pre--80, post--45) and control group members (pre--140, post--170).

Administration Time

Ten minutes.

Administration Mode

Check sheets distributed through quality circle and control groups department staff.

Problems With the Study

It should be noted that within the six-month period in which the pilot was being evaluated, four events with organization-wide impact occurred at the hospital. Three of them were unanticipated.

1. Due to economic concerns there was a 20 percent cutback in staff time.

2. There was a major union organizing effort by the professional employees.

3. The joint commission on accreditation of hospitals conducted their survey (this was the one anticipated event).

4. The Vice President for administration of the hospital resigned.

In addition to these problems, during the tenth week of the pilot one of the circle leaders resigned from the organization. This leader was replaced by a circle member who had not been trained in quality circle leadership techniques.

#### Problems With the Test Instrument

The Job Reaction Questionnaire selected as the main instrument to be used in the evaluation of the pilot was provided to the hospital by the consultants engaged to implement quality circles. They did not use the instrument as part of their own implementation and evaluation plan but were aware of its use by other hospitals in which they had installed quality circles. In considering the time constraints under which the pilot was to be evaluated, the decision was made to use this instrument rather than develop or try to find another. Neither reliability nor validity, therefore, could be guaranteed.

The instrument was administered without coding responses on the first application of the test. This resulted in not being able to match response for response in posttesting. This may not have been a real problem if the number of participants had remained static between pre- and posttesting. That was not the case, however, and it was not obvious until the posttest results were tabulated.

The main problem presented by the administration of the test was that some of the test takers did not know whether they were, in fact, members of a quality circle. Since all department employees were oriented to the concept, but only a handful volunteered to be in the circles, those who were oriented seemed to have assumed that they were members. It is clear that this confusion should have been anticipated due to the newness of the quality circle concept to the majority of the employee population.

The size of the institution (more than 5,000 employees), the numbers of participants in the control groups (approximately 170), and the fact that three shifts were involved, all contributed to the loss of control in the administration of the Job Reaction Questionnaire. The main complication presented by the spanning of several shifts was that the questionnaire had to be administered by more than half a dozen different people. Despite the fact that each received the same instructions in writing for administering the test, the results indicated that there could not have been strict adherence to these instructions.

Another problem with this study is in the method of selection of circle members. A true experimental design requires that randomization occur in the selection of test and control groups. This requirement is

compromised in this study by the fact that the quality circle concept requires that members of the quality circle be volunteers. It is possible that this created a built-in bias that is avoided by use of randomization in a true experimental design.

The design of the questions on the Job Reaction Survey was faulty. This Likert-type response scale moves from "strongly agree" to "strongly disagree"; however, all statements are given in the positive. This flaw permits patterned responses instead of requiring a rethinking of the question in order to give the most accurate answer. Analysis of the raw data seems to indicate that this is the case and, therefore, any conclusions drawn based on this data certainly cannot be considered generalizable to the population.

One final problem with the study again involves the Job Reaction Questionnaire and its use in the pretest. In addition to the questionable validity of the results of individual statements, as previously noted, another doubt arises with regard to the identification of the concepts expected to be measured by the 40 questions. This must be considered suspect due to the inability to identify the source of the instrument. Although three statements are identified within the instrument as measures of overall job satisfaction, it is not possible to prove without a doubt that they are, unless the

instrument can be proven both reliable and valid. Lacking knowledge of its source, the question remains.

#### Problems With Program Maintenance

Although the Advisory Committee started with representatives from the Vice Presidential level down through middle management, with the exception of one Vice President, the composition of the Advisory Committee at the end of the pilot consisted of mainly middle managers. In fact, the committee began with 25 members and ended with fewer than 10.

The coordinator of the pilot assumed responsibility for the implementation phase of the pilot in addition to other full-time duties as a department head.

The facilitators responsible for meeting-to-meeting process of the quality circles were relatively high level middle and upper managers who maintained their full-time duties in addition to quality circle activities.

In the final analysis, facilitators, one by one, dropped out of their circle duties, not for lack of interest, but for lack of time. These facilitation duties were assumed by the coordinator and one of the staff members.



Quality Circles, Job Satisfaction,  
and Age

A survey instrument containing 40 items was administered to two groups of employees at the hospital. One group was the immediate work group within which a quality circle existed, and the other group was a different department in which similar work was carried out. In design, each group contained approximately the same number of employees for the pretest application of the survey. This number changed in the posttest due to lack of controls mentioned previously.

The title of the survey instrument is "Job Reaction Questionnaire." Although all statements measure various dimensions of job satisfaction (work efficiency, cooperation, management communication/response, personal influence, job knowledge, task significance, recognition/feedback), three statements at the end of the survey instrument (statements 37, 39, and 40) are identified as those that measure overall job satisfaction. In analyzing the data, only these statements are addressed and controlled for by age and circle membership.

The face sheet provided with each Job Reaction Questionnaire asked employees to give demographic information including sex, length of employment at the hospital, age (18-29, 30-39, 40-49, 50-59, 60>), job title, and whether they were circle members.

Inasmuch as the sample size is small, there is no attempt to extend analysis to job categories since this would further reduce the sample size. Therefore, the information provided discusses job satisfaction specifically in terms of age without controlling for the other factors such as education, position, or tenure.

The three statements determined as predictors of job satisfaction are as follows:

1. Statement 37: Considering everything, I'm satisfied with this job.
2. Statement 39: For the most part, I enjoy working with the people in my unit.
3. Statement 40: If a friend wanted to apply for an opening at this hospital, I would encourage him/her to do so.

Analysis of the data for the purposes of this thesis is made based on the concept of overall job satisfaction as measured by the combination of these three statements as opposed to analysis of the individual statements.

CHAPTER VII  
ANALYSIS OF THE DATA

Before reporting the findings of this study, it is important to remind the reader that in the analysis of secondary data one inherits the methodological problems incurred in the original collection of the information. Such is the case with this data. Given that initial involvement in the design of the data collection was not possible, there was some compulsion in clearly identifying the quality circle group membership among the people participating in the study. This problem must be recognized and considered when reporting and reviewing results of this study.

Statistical Analysis Using  
Chi Square

In order to evaluate whether job satisfaction was, in fact, affected by the quality circle intervention, a statistical analysis of the Job Reaction Questionnaire was undertaken using an inferential statistical method, chi square.

In employing chi square, the difference between observed and expected cell frequencies is squared to

eliminate negative differences and the squared difference is divided by the expected cell frequency. The sum of the cells is then calculated for the chi square value. This statistical method helps circumvent the problems presented by differences in the distributions. This asset of chi square is important in the analysis that follows due to loss of control of the number of participants in the pre- and posttest period. The chi square test is a measure of significance and not of association. Scores are used to determine whether there is, in fact, any significance among the age groups participating.

To calculate the chi square distribution, the results of all three questions were collapsed from the five-cell Likert scale into three cells: "agree/strongly agree (S.A.)," "neither agree nor disagree (Neither)," and "disagree/strongly disagree (S.D.)."

The results are reported below with the chi square values and a brief interpretation following each table.

In considering significance at the .05 level with two degrees of freedom, it would be necessary for a given chi square to approach at least 5.991.

Among those 18-29, no significant difference appears in job satisfaction between the pretest and the posttest. Although it does appear that there was a decrease in job satisfaction, the decrease does not approach the 5.991 level of significance.

Table 1  
Pretest Overall Job Satisfaction,  
Ages 18-29

Participation	Overall Job Satisfaction		
	S.A.	Neither	S.D.
Circle	102 (107.4)	47 (43.5)	24 (22.1)
	.271	.281	.163
Non-Circle	24 (18.6)	4 (7.5)	2 (3.8)
	1.57	1.63	.852

Chi Square: 4.767

Table 2  
Posttest Overall Job Satisfaction,  
Ages 18-29

Participation	Overall Job Satisfaction		
	S.A.	Neither	S.D.
Circle	39 (43.4)	20 (16.8)	10 (8.7)
	.446	.609	1.94
Non-Circle	108 (101.6)	36 (39.2)	17 (20.3)
	.403	.261	.536

Chi Square: 2.449

Table 3  
Pretest Overall Job Satisfaction,  
Ages 30-39

Participation	Overall Job Satisfaction		
	S.A.	Neither	S.D.
Circle	115 (115.5)	50 (53.0)	18 (14.5)
	.002	.170	.845
Non-Circle	44 (43.5)	23 (20.0)	2 (5.5)
	.005	.45	2.23

Chi Square: 3.702

Table 4  
Posttest Overall Job Satisfaction,  
Ages 30-39

Participation	Overall Job Satisfaction		
	S.A.	Neither	S.D.
Circle	65 (64.1)	25 (29.3)	11 (4.9)
	.013	.631	7.59
Non-Circle	106 (106.9)	53 (48.7)	9 (12.4)
	.007	.380	.932

Chi Square: 9.553

In evaluating the chi square values for the 30-39 age group, the posttest does indicate significance at the .05 level although it can only be speculated as to whether the existence of the quality circle actually made the difference. The large discrepancy in the number of participants between the pretest and the posttest could account for random significance rather than statistical significance and is then an artifact of a methodological problem.

In the non-circle pretest for the 40-49 age group, the average response was "no opinion" (neither agree nor disagree), and this appears to have changed to strongly agree in the posttest. This implies that the existence of the quality circle did not enhance job satisfaction for this age group. Something was going on, however, since the chi square of 8.693 (significant at the .05 level in the pretest) does not approach the level of significance in the posttest. Expectations seem to have been raised in the posttest period. It can only be speculated that this increase had anything to do with the existence of a quality circle.

In the 50-59 age group, there was significance at the .05 level in both the pre- and the posttest. Since there was no change, this would imply that the presence of the quality circle did not alter job satisfaction in this age group.

Table 5  
Pretest Overall Job Satisfaction,  
Ages 40-49

Participation	Overall Job Satisfaction		
	S.A.	Neither	S.D.
Circle	62 (54.7)	17 (20.3)	7 (11.0)
	.974	.536	1.45
Non-Circle	8 (15.3)	9 (5.7)	7 (3.0)
	3.49	1.91	.333

Chi Square: 8.693

Table 6  
Posttest Overall Job Satisfaction,  
Ages 40-49

Participation	Overall Job Satisfaction		
	S.A.	Neither	S.D.
Circle	36 (38.7)	13 (15.1)	11 (7.2)
	.188	.292	2.00
Non-Circle	45 (42.3)	19 (16.9)	3 (7.8)
	.172	.261	2.95

Chi Square: 5.863



Table 7  
Pretest Overall Job Satisfaction,  
Ages 50-59

Participation	Overall Job Satisfaction		
	S.A.	Neither	S.D.
Circle	29 (30.1)	6 (5.3)	1 (0.8)
	.040	9.25	.05
Non-Circle	12 (10.1)	1 (1.8)	0 (0.3)
	.357	.355	.3

Chi Square: 10.35

Table 8  
Posttest Overall Job Satisfaction,  
Ages 50-59

Participation	Overall Job Satisfaction		
	S.A.	Neither	S.D.
Circle	21 (22.7)	6 (3.3)	0 (1.0)
	.127	2.21	1
Non-Circle	26 (24.3)	1 (3.7)	2 (1.0)
	.119	1.97	1

Chi Square: 6.426

Table 9  
Pretest Overall Job Satisfaction,  
Age 60>

Participation	Overall Job Satisfaction		
	S.A.	Neither	S.D.
Circle	16 (16.0)	5 (5.0)	1 (1.0)
	0	0	0
Non-Circle	No distributions available		

Table 10  
Posttest Overall Job Satisfaction,  
Age 60>

Participation	Overall Job Satisfaction		
	S.A.	Neither	S.D.
Circle	4 (6.8)	5 (1.8)	1 (1.4)
	1.15	5.69	.114
Non-Circle	11 (10.8)	2 (2.6)	2 (1.6)
	.004	.138	.1
Chi Square: 7.196			

Due to the fact that the data used for this secondary analysis reported no distributions for the non-circle in the pretest, it is not possible to calculate chi square for those age 60>. In the posttest, however, there is significance at the .05 level. It cannot be attributed to the presence of the quality circle since there is no pretest data against which to compare it.

#### Summary of Tables

In examining the data in the aggregate, it is not clear whether the circles themselves had anything to do with the increased overall job satisfaction or if one or all of the other organizational crises that occurred during this period actually had an impact on job satisfaction. The union organizing drive by technical and professional staff resulted in unprecedented managerial involvement with these staff members by means of special meetings, special visits to the patient floors, and special communication efforts through newsletters and other employee publications. This kind of attention results in what has been referred to as the Hawthorne effect (Herzberg et al., 1959), and would result in workers improving their performance merely because of the attention being received by them rather than due to any manipulation of working conditions or incentives.

The possibility of a source of systematic error should also be noted because of the problems associated with the administration of the Job Reaction Questionnaire, the other organizational crises during the period of the study, selective dropout (Campbell & Stanley, 1963) in the loss of subjects during the course of the experiment due to changing residences, and loss of interest. These phenomena tend to affect results in a positive direction and could explain the results given the discrepancies in the numbers queried from time one to time two.

The chi square values for levels of significance across age groups based on circle participation strongly suggest that participation in quality circles has little or no effect on increasing job satisfaction among workers of any age. Only the 30-39 age group shows significance in the posttest and this could be related to the quality circle experience, but such an assertion is purely speculative.

#### Summary of Chapter

Analysis of the secondary data suggests no significant difference between ages on the pretest or the posttest. No difference was found between age groups between the pretest and the posttest that could be attributed solely to the experience of the quality circle intervention. There is, however, some evidence suggesting that a participative management quality circle intervention

may have some effect on job satisfaction of workers. Based solely on these data, if age is a factor at all, it may surface among middle aged workers but not necessarily among young or older workers.

If any conclusion can be drawn from these data, it is that implementation of this particular type of participative management technique is not necessarily the definitive answer for increasing job satisfaction for any age group. This conclusion seems to agree with Lawler's (1981) statement, previously cited, that "the jury is still out" on whether employee involvement is the primary management approach that should be taken in the 1980s and beyond.

## CHAPTER VIII

## CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Analysis of the data using the chi square test failed to show a significant difference in job satisfaction that can be attributed to the existence of the quality circle intervention between time one and time two. The significance reported for the 30-39 age group may be due to the existence of the quality circle or may be an artifact of a methodological problem. The significance shown in the 50-59 age group is at the .05 level, but that is true both in the pretest and the posttest. Therefore, whether or not the posttest positive job satisfaction is related to the existence of the circle cannot be determined. No conclusive findings can be reported based on these data. This failure to show significance is not necessarily reflective of the ability of a quality circle intervention to affect job satisfaction in a positive direction, but rather due to the various problems connected with the data gathering phase as related in Chapter VI.

Inasmuch as quality circles are voluntary in nature, the self-selection of people into the circle could, in itself, make a difference in outcomes. This could imply that those who want change volunteer to participate and those who do not want change do not volunteer. Undoubtedly, further research must be conducted under controlled circumstances before a conclusive statement can be made about the relationship between quality circles as a participative management intervention and age.

#### Recommendations

In designing an organizational plan for the future, organizations of today are increasingly looking at the bottom line--productivity. Decreased job satisfaction has been positively associated with decreased productivity so it would seem appropriate for today's organizational planners to begin to address this concern in terms of their human resource capital. American management points to the Japanese experience with quality circles and hopes that adoption of the Japanese model will result in the same high productivity they have experienced. Cultural settings and orientations aside, the significance of the participative relationship has not gone unnoticed. Not only does this approach tend to foster increased job satisfaction because of worker involvement in decision

making, but it also increases the quality of the decisions (Bowditch & Buono, 1982). What cannot be ignored is the fact that quality begins with the design of the quality circle program. Shortcuts in the design, not enough time given to its infancy prior to evaluation and lack of resources, including adequate staffing needed to insure its success, all contribute to failure before the plan is given a significant chance.

Much has been written about the success of the excellent companies and the methods they employ to provide incentives for quality and high productivity leading to job satisfaction. At companies like Westinghouse, they believe that their success in business is built on customer trust in the quality of the product and service they provide. Douglas Danforth, Chairman of Westinghouse Electric Corporation, suggests that perhaps management's penchant for complexity over simplicity has led us to lose sight of this business basic.

In an address to members of the American Hospital Association, Dr. Bruce Campbell, Executive Director, University of Chicago Hospitals and Clinics, focused on the need to strengthen an organization's culture so that it motivates staff to act toward organizational goals. Dr. Campbell described culture as "the soft side of an organization, the human elements that weave together the organization's myths, rituals, and heroes so that those



in the organization might understand and share its values" (Hickey, 1983). Rather than merely accepting an organizational culture, management of it in ways that will contribute to that culture is usually problematic for the organization. Dealing with the emerging new health care environment that will demand productivity, innovation, and risk-taking rather than the usual risk-avoidance necessitates a cultural reorientation in hospitals as it has in other businesses.

Hospitals and other health care providers have just recently awakened to the realization that they are businesses and must learn to function as such. Until that realization results in actions taken to incorporate major change in all areas of operation, it is futile to assume that they can jump in the middle of the parade in perfect step with the rest of the marchers. In the same way, they cannot haphazardly acquire the latest management techniques and implement them from the bottom up with a realistic expectation that they will be catapulted into the 21st century. Companies such as those recently touted as "excellent companies" (Peters & Waterman, 1982) have their management house in order and a "bias towards action" that precludes their willingness as risk takers and experimenters.

The experience in this study shows that mere implementation of a program designed to increase job

satisfaction through participation in decision making is not enough to insure worker involvement. It is possible that a six-month review was too soon to expect any real results. Worker attitudes are evolutionary and are the result of not only internal motivation but external situations. The experience in this study shows the impact that external situations can impose.

If the research findings noted elsewhere in this thesis can be trusted, workers of the future will have greater expectations from their jobs. They will have desires for meaningful and challenging work; they will want to be involved in decision making that affects their work environment. Odiorne (1981) suggests

That involvement of professional workers, not just their managers, in decisions that involve them will result in support for the decisions carried out with greater zeal and intelligence than those who receive decisions from persons less aware of the perplexities and obstacles of professional conduct.

Even if this study were able to prove that the quality circles approach does improve job satisfaction, it must be pointed out that increased satisfaction does not necessary result in increased performance (productivity). It, therefore, appears that management must develop some method of tapping into the intrinsic motivators that each individual possesses. These are the internal rewards a worker may receive from a satisfying job. The

performance-reward-satisfaction cycle must be understood before meaningful interventions can be developed and implemented.

Age surfaces as a factor influencing job satisfaction when management bias towards younger workers closes off the opportunity for intrinsic satisfaction for the older worker. In this case, the older worker must turn towards extrinsic satisfaction because the intrinsic rewards are no longer accessible (Arvey & Dewhirst, 1979). Considering the projected profile of the worker of the future, it would be shortsighted to dismiss the possibility that such extrinsic satisfaction could take the form of some type of organizing effort to effect change. Unfortunately, many organizations do not experience sufficient dissatisfaction to stimulate them to change. The sources of energy for change must come from pressures created by those such as employee groups (Beer & Driscoll, 1977). Implementation of participative approaches under these circumstances must be approached cautiously in order to transfer the energy and motivation from the group to the organization.

It is reported that increased levels of education are correlated with decreased job satisfaction (Glenn et al., 1977; O'Brien & Dowling, 1981). If the workers in the 40 to 49 age range whose job satisfaction was good to begin with in this study are indeed highly educated

technical or professional employees, their decline in job satisfaction in the posttest might be expected since this education is the basis for increased expectations of benefits to be derived from their work. It is important for the organization to recognize that a poorly planned and implemented effort to include these employees can have negative consequences for the group and the organization as well by decreasing satisfaction.

Hackman and Suttle (1977) found that the health of the organizational climate is critical to the success of a participative effort. If the climate is permeated with labor-management discontent, there is less likelihood that effective participation can result. Hunt (1979) agrees with this when he states that the resistance to change is usually to the method of introducing change rather than to the change itself. The union organizing effort present at the time of this study in the subject organization may have diluted any effect the quality circle intervention could have had. Organizations considering such an intervention must be more in tune to their climate and implement such participative approaches only when steps first have been taken to effect change in attitudes starting at the top. Once these attitudes are transferred to behaviors, workers may be more open to participation as the organization's operational strategy rather than a perceived organizational panacea.

It appears that age as a critical consideration for worker involvement can be put aside for the moment. Something more significant decides the outcomes of participative approaches. Juechter (1983) lists two ingredients necessary for participation to flourish. First, participative management cannot be rushed into. A six-month pilot (as was the case in the organization used in the study) expected to show results is unrealistic. He cites one of the main reasons such efforts fail is that time is crucial in changing existing management attitudes and behaviors. Proper and continuing training is necessary to foster this change. Second, an atmosphere of trust and respect must be present and obvious. Managers must be willing to acknowledge and accept good ideas that further the goals of the department. Other organizations attempting to implement any participative approach must be aware of time as an instrument to be used to insure success. Time allows the problems to present themselves and to be solved. A problem-free environment does not necessarily insure success; it may stifle growth. Time also is essential in building trust. In fact, relationship building of any kind is likely to find the liberal but controlled use of time an ally.

According to Ritchie and Miles (1970), supervisory trust is critical. Supervisor attitudes towards their subordinates have a greater impact on subordinate job

satisfaction than does the sheer amount of participatory consultation. Organizations that decide to consider a quality circles program must not select it as "the" participative approach for their organization. Everyone must be trained and educated at every level of the organization so that the message is clear that this is one of many ways that management and employees are building their symbiotic relationship.

Throughout the literature one theme rings clear. The active commitment of management is vital to any effort in participative management. This must begin at the top of the organization and cannot be unleashed only in timely fashion to combat the next organizing attempt by a union, or to assuage employee complaints at other levels. All employees, regardless of age, are involved in a dramatic change in technology that is moving at a faster rate than any time in history. All employees, regardless of age, expect to be involved and have some say over their work lives. All employees, regardless of age, know that work is only one facet of their complex lives and expect options to be made available to them as much in this facet as in their personal pursuits. Organizations of the present who hope to exist in the future must recognize that perhaps their most significant assets lie in their human resources. Once this is accepted, the course is well defined.

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APPENDIXES

APPENDIX A  
JOB REACTION QUESTIONNAIRE

COPY  
JOB REACTION QUESTIONNAIRE

INSTRUCTIONS: Please fill in the blanks and check the appropriate boxes.

(To insure the anonymity of each employee participating in this survey, we ask that you do not provide your name. However, we do need the following information for our data analysis.)

1. Male \_\_\_\_\_ Female \_\_\_\_\_
2. Length of employment at this hospital: \_\_\_\_\_ years \_\_\_\_\_ months
3. Age: 18-29 \_\_\_\_\_ 30-39 \_\_\_\_\_ 40-49 \_\_\_\_\_ 50-59 \_\_\_\_\_ 60+ \_\_\_\_\_
4. Job Title: \_\_\_\_\_
5. Are you a member of one of the five pilot quality circles here?  
Yes \_\_\_\_\_ No \_\_\_\_\_

COPY  
JOB REACTION QUESTIONNAIRE

	<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	<u>Neither</u> <u>Agree or</u> <u>Disagree</u>	<u>Disagree</u>	<u>Strongly</u> <u>Disagree</u>
1. We seldom have delays or foul-ups at work.	1	2	3	4	5
2. My work group is well organized.	1	2	3	4	5
3. Meetings to exchange information and ideas are held pretty often.	1	2	3	4	5
4. When something at work really bothers me I can usually get some changes made.	1	2	3	4	5
5. My job gives me a chance to use my talents.	1	2	3	4	5
6. I get a lot of information about how well I'm doing on my job.	1	2	3	4	5
7. Problems here get corrected quickly.	1	2	3	4	5
8. I feel part of a very efficient organization.	1	2	3	4	5
9. We get a chance to air out our problems here.	1	2	3	4	5
10. People like me can get changes made at work if we make ourselves heard.	1	2	3	4	5



	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
11. This department puts my experience to good use.	1	2	3	4	5
12. I know what the goals of my work group are.	1	2	3	4	5
13. We don't have much confusion at work.	1	2	3	4	5
14. There is a spirit of cooperation between people in different kinds of jobs in the work area.	1	2	3	4	5
15. When management says we have to live with a problem they usually explain the reason to our satisfaction.	1	2	3	4	5
16. My opinion carries weight with the people who make decisions around here.	1	2	3	4	5
17. My job really makes use of my skills and abilities.	1	2	3	4	5
18. My supervisor criticizes my job performance in a way that helps me improve.	1	2	3	4	5
19. Work groups here cooperate to get the job done.	1	2	3	4	5
20. Management here acts on employee suggestions.	1	2	3	4	5

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
21. If some rule or policy makes our work harder, we can usually get it changed.	1	2	3	4	5
22. I can make good use of my skills because I've been trained in what I am suppose to do.	1	2	3	4	5
23. In my job I know who the people are who use my service or product.	1	2	3	4	5
24. When I do well in my job the people I work with tell me so.	1	2	3	4	5
25. There's not much waste of materials at work.	1	2	3	4	5
26. When other sections can't give my unit proper service we usually find out why.	1	2	3	4	5
27. When I have a good idea about how work should be done, people higher up take me seriously..	1	2	3	4	5
28. I am taught new things which increase my job knowledge and confidence.	1	2	3	4	5
29. I know how my job affects people on other jobs.	1	2	3	4	5

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
30. My boss usually recognizes when I do good work and usually tells me so.	1	2	3	4	5
31. We plan ahead for problems that might arise.	1	2	3	4	5
32. When we need help from another section or function, they follow through without delay or complaints.	1	2	3	4	5
33. When employees make suggestions here, things get done.	1	2	3	4	5
34. This is a better place because I work here.	1	2	3	4	5
35. It is clear to me what is expected of me on my job.	1	2	3	4	5
36. If I perform well on my job I will be recognized for my contributions.	1	2	3	4	5
37. Considering everything, I'm satisfied with this job.	1	2	3	4	5
38. In general, other departments try hard to respond to our needs.	1	2	3	4	5

	<u>Strongly</u> <u>Agree</u>	<u>Agree</u>	<u>Neither</u> <u>Agree or</u> <u>Disagree</u>	<u>Disagree</u>	<u>Strongly</u> <u>Disagree</u>
39. For the most part, I enjoy working with the people in my unit.	1	2	3	4	5
40. If a friend wanted to apply for an opening at this hospital, I would encourage him/her to do so.	1	2	3	4	5

APPENDIX B  
INSTRUMENT NUMBERS 2 THROUGH 9

Instrument Number 2--Leader InterviewPurpose:

To obtain feedback from leaders on total circle experience.

Categories of Evaluation:

1. Circle functions
2. Management skills
3. Communication
4. Job satisfaction
5. Job performance
6. Productivity
7. Training
8. Facilitation
9. Institutional support
10. Personal growth
11. Program potential

Group and Number Reporting:

Quality circle leaders (5).

Administration Time:

One hour.

Administration Mode:

Interviews conducted by Program Staff.

Instrument Number 3--Member QuestionnairePurpose:

To obtain member feedback on circle experience.

Categories of Evaluation:

1. Circle function
2. Management skills
3. Communication
4. Job satisfaction
5. Job performance
6. Training
7. Facilitation
8. Personal growth
9. Program potential

Group and Number Reporting:

Quality circle members (39 responses received).

Administration Time and Mode:

Approximately 10 minutes.

Questionnaires and pre-addressed envelopes were provided to each leader to give to each member of the circle at a meeting. Ten minutes of circle meeting time was to be allotted to completing the form which was then to be dropped in the mail in the pre-addressed envelopes.

Instrument Number 4--Manager InterviewPurpose:

To obtain middle managers' view of the quality circle experience in their departments.

Categories of Evaluation:

1. Circle function

2. Management skills
3. Communication
4. Job performance
5. Productivity
6. Institutional support
7. Personal growth
8. Program potential
9. Training

Group and Number Reporting:

Managers with direct reporting relationships with the leaders of the five circles (5).

Administration Time:

Thirty to forty-five minutes.

Administration Mode:

Interviews conducted by program staff.

Instrument Number 5--Leader Rating Sheet

Purpose:

To obtain leaders' evaluations of each member of the circle.

Categories of Evaluation:

1. Job performance
2. Communication
3. Job satisfaction
4. Personal growth



Group and Number Reporting:

Quality circle members (39 members were individually rated by their leaders).

Administration Time:

Five to ten minutes (estimated per member).

Administration Mode:

Leaders were given rating sheets and asked to complete one for each member.

Instrument Number 6--Group EvaluationPurpose:

To obtain feedback from each group on the quality circle experience and to allow the group to engage in self-assessment.

Categories of Evaluation:

1. Circle function
2. Communication
3. Job satisfaction
4. Job performance
5. Training
6. Facilitation
7. Personal growth
8. Program potential

Group and Number Reporting:

Quality circle groups (5).

Administration Time:

Two hours.

Administration Mode:

Group discussion led by leader/facilitator.

Instrument Number 7--Problem Status SheetPurpose:

To identify the status of problems addressed by each group.

Categories of Evaluation:

1. Productivity
2. Program potential

Group and Number Reporting:

Each circle (5).

Administration Mode:

The leader was asked to work with the facilitator in preparing one status sheet for each problem addressed by the group.

Instrument Number 8--Facilitator InterviewPurpose:

To elicit feedback from facilitators on the total circle experience.

Categories of Evaluation:

1. Circle function
2. Communication
3. Job satisfaction
4. Job performance

5. Productivity
6. Training
7. Facilitation
8. Institutional growth
9. Personal growth
10. Program potential

Group and Number Reporting:

Quality circle facilitators (5).

Administration Time:

Forty-five minutes.

Administration Mode:

Interviews conducted by program staff.

Instrument Number 9--Facilitator Reports

Purpose:

To obtain an overview of the function of each circle.

Categories of Evaluation:

1. Circle function
2. Facilitation

Group and Number Reporting:

Quality circle facilitators (4).

Administration Time:

Uncertain.

Administration Mode:

Each facilitator was asked to provide a written anecdotal account of the development of his/her circle. One facilitator was separated from the hospital at this time and did not provide a report on the circle.

As can be seen from the extensive methodology employed in the evaluation of these circles, job satisfaction was measured by almost all of the instruments.