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TQM comes to the Carter Company: A case study
of quality improvement teams in a total quality management initiative
in a mid-sized manufacturing company

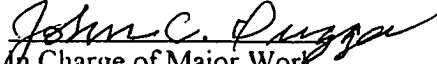
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James William Teegarden

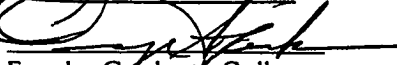
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To Cynthia, Alicia, Monica, Mark, and Amelia

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PROLOGUE: WHY MANUFACTURING MATTERS

Manufacturing is vitally important to the future of the United States. In recent years, however, the concept of a post-industrial economy has become accepted as not only inevitable but desirable. The idea of a post-industrial society began with Bell (1973), and has been popularized by authors such as Toffler (1980). This thinking has become pervasive even in business circles. As an example, a report by the New York Stock Exchange stated that "a strong manufacturing sector is not a requisite for a prosperous economy" ("U.S. International Competitiveness," 1984, p. 32). My purpose in this prologue is to highlight some of the fallacies in the logic that has created the incorrect perception that manufacturing is not important, that the United States should focus instead on developing a strong service-driven economy.

The proponents of a post-industrial economy consider a service-driven economy as the most advanced stage of economic development. However, as Cohen and Zysman (1987) explain, if America loses manufacturing, we also lose the high-wage service jobs. When viewed in this context, it follows that if major segments of manufacturing were to move offshore, high-wage service jobs would soon follow and the economy in the United States would decline dramatically.

Before delving into the relationship between manufacturing and high-wage service jobs, it may be helpful to examine the underlying thought process of the proponents of a post-industrial economy. The argument starts with an observation: in 1950, 34 percent of American jobs were in manufacturing and by 1994 only 16 percent of American jobs were in manufacturing (Economic Report of the President, 1995). The basic idea underpinning the post-industrial argument is that this "decline" in manufacturing is simply a natural evolution, just as our economy evolved from an agriculture-based economy to an industry-based economy. The problem with this analogy is that agriculture is by no means an activity of the past. "Agriculture has sustained, over the long term, the highest rate of productivity increase of any sector" (Cohen & Zysman, 1987, p. 6). American agricultural production has increased

dramatically in the last half century. In other words, we did not shift out of agriculture, but we have gone through a dramatic transition. Manufacturing is also in a state of transition, but that does not mean that manufacturing is any less important to the future of the United States.

Proponents of a post-industrial economy fail to recognize the linkage between service jobs and manufacturing. "25% of U.S. GNP originates in services used as inputs by goods-producing industries" (Annual Report, 1983). The implication of this linkage is clear: when production moves offshore, services will follow. As Cohen and Zysman (1987) explain,

Not very long ago the United States exported high-end services in the steel industry. Then U.S. steel producers fell behind in technology, in the organization of production, and in the design and operation of the production technologies and facilities. Now we import those same services from our former customers in Europe and Japan (p. 38).

New product technologies are an important element in the United States' economic future. But developing new products is only the first step. Consider, for example, three of the leading consumer products introduced in the last two decades: the video camera, the fax, and the CD player. The first two were invented in the United States, the CD player in the Netherlands. But, as Thurow (1992) points out, "in terms of sales, employment, and profit, all three have become Japanese products" (p. 47).

Some business publications have sounded the alarm about the implications of the loss of manufacturing leadership. Business Week ("The Hollow Corporation," 1986, p. 57) published a Special Report edition about how "hollow" corporations created by the decline of manufacturing threaten the entire U.S. economy. Similarly, in a special series of articles on the "Perils of Deindustrialization," Industry Week (Modic, 1985) pointed out that each nation in the world recognizes that "economic survival requires a value-added economy . . . each, that is except the United States—which continues to be nonplused over the erosion of its basic industries" (p. 25). This contrast in philosophy was highlighted recently by an American economist who is based in Japan. Speaking to the wide gap between levels of foreign investments by the United States and Japan, he noted that Japanese companies "are still finding it profitable to invest at home. The hollowing out [of Japan's economy] isn't

occurring" (Zachary, 1995b, p. 2A). And, in 1986, the Massachusetts Institute of Technology convened its first commission on a national issue since the end of World War II to address the decline in America's industrial performance "perceived to be so serious as to threaten the nation's economic future" (Dertouzos, Lester, & Solow, 1989, p. ix).

Manufacturing jobs have long provided many Americans with "middle class" incomes. The disappearance of these jobs has caused a major shift in levels of income. The great middle income is shrinking; incomes in America are becoming polarized. Harrison and Bluestone (1988) report employment by wage stratum data showing that for the time period 1963 to 1973 almost nine out of every ten new jobs created paid middle-income wages. For the time period 1979 to 1986, however, that figure shrank to only one in two (pp. 121-123). Average weekly earning in the private sector fell nearly 20 percent (adjusted for inflation) from 1972 to 1994 (Economic Report of the President, 1995).

In summary, manufacturing is critical to the health of the economy of United States. Our economy is in transition and American manufacturing is changing to adapt to changes in the global marketplace. This transition is not to some post-industrial economy but a different type of industrial economy.

CHAPTER ONE

PLANT CLOSURES AND LAYOFFS—AMERICA'S FUTURE?

American businessmen must run their businesses with greater and greater profit foremost in mind. . . . America's industrial establishment is being reduced to a mere shell.

Akio Morita, 1986
Chairman and founder, Sony Corp.

In a small midwestern city sits an empty plant. The darkened windows of the reception lobby, now covered with graffiti, stand in stark contrast to the inviting entry-way that had welcomed so many visitors to the plant. For more than 100 years, the Carter Company's Home Plant was alive with the sights, sounds, and smells of manufacturing. Now the people are gone. The hustle and bustle have been replaced with an eerie silence. This once vibrant company, with its proud traditions, no longer provides jobs for the community.

The Carter Company's owner made a valiant effort to save the company. Harold Miller introduced many changes during the seven years that he owned the company. A Total Quality Management (TQM) initiative was his final attempt to achieve a turnaround. Less than three years after launching this effort, however, the company was forced to close its doors forever. What went wrong?

I spent three months conducting interviews in the Carter Company¹ in the spring of 1995, two years after the company began its TQM initiative. I interviewed the owner and his management group to gain an understanding of the company culture and their perceptions about the TQM process at the Carter Company. I talked with office workers, production workers, people who had served on quality improvement teams, and people who had not served on teams. I held follow-up interviews with most. In total, I interviewed 50 of the Carter Company's 165 employees. Appendix A provides a detailed explanation of the

¹ The Carter Company is a pseudonym.



research design and the methods of data collection and analysis used in conducting this investigation.

Originally, I was drawn to this study by my interest in the use of cross functional quality improvement teams as an element in an overall TQM initiative. I expected to find that TQM had brought about improvements in the Carter Company, and I planned to study the ways in which quality teams had contributed to that success. What I found was that the TQM initiative had not helped. To the contrary, the time and energy spent on the TQM effort was actually accelerating the demise of the company. As our story unfolds, I will highlight the ways in which the Carter Company's TQM implementation went awry. One of the primary points of my story will be that TQM was the wrong agenda for the Carter Company.

My purpose in telling this story is to help other organizations learn from the experiences of the people in the Carter Company as they implemented TQM. But this report is not just about the Carter Company. It is about American manufacturing. What has gone wrong in American manufacturing? What can we do about it? Some manufacturing companies have adapted to changes in their environments, capitalized on new opportunities, and prospered. Total Quality Management philosophies, concepts, and tools have been given credit for the transformation of many successful organizations. Others, like the Carter Company, have not been successful with TQM. In fact, the Carter Company's experience suggests that adopting TQM can actually be detrimental in some situations.

In this report, I will describe the processes used by the Carter Company's management as they implemented TQM. I will also portray how various contingencies within the Carter Company perceived this implementation process. From these depictions, I will illustrate where the Carter Company's implementation went wrong and identify pitfalls that organizations seeking to adopt TQM need to avoid. The Carter Company's experience also raises questions about the efficacy of TQM. Later in this chapter, I provide arguments on both sides of that question in a section entitled *The debate about TQM*. I would ask my readers to carefully consider these arguments, to weigh the evidence presented in this report, and then decide whether TQM is the right agenda for American manufacturing.

Since my objective is to place this study in the broad context of the changes taking place in American manufacturing, I begin this report with an brief overview of what has happened to the United States' manufacturing base since the 1950s.

The decline of American manufacturing

In 1950 America's manufacturing capability was the envy of the world. The industrial complex developed during World War II had been converted to a powerful engine of growth. At one point, the United States "made half of all the manufactured goods sold anywhere in the world" (Dobyns & Crawford-Mason, 1991, p. 10). There was a seemingly insatiable demand for American goods around the world. This led to a remarkable period of expansion and prosperity that lasted for decades.

After this period of unprecedented growth, cracks began to appear in America's manufacturing base. Today, American manufacturing is under siege. For the last quarter of a century, the United States has gone through a period of *deindustrialization*. Bluestone and Harrison (1982) define deindustrialization as the "widespread, systematic disinvestment in the nation's basic productive capacity" (p. 6), and provide quantitative evidence of the impact of this deindustrialization. One of the most striking of the Bluestone and Harrison conclusions is that "over the whole decade of the 1970s, a minimum of 32 million jobs were probably eliminated in the United States as a direct result of private disinvestment in plant and equipment" (p. 35).

The most economically tangible aspect of America's *deindustrialization* is reflected in the United States trade balance with other countries. The trade balance is simply the difference between what America exports and what it imports. The United States has had a negative trade balance every year since 1975. In 1994, the United States imported \$124 billion more in goods and services than it exported. The trade balance is actually favorable in the services sector. The trade deficit in durable and nondurable goods was a whopping \$176 billion in 1994; the United States imported 33 percent more goods than it exported (Economic Report of the President, 1995).

It is no mere coincidence that the swing from a position of net exporter to net importer occurred as we began the period of *deindustrialization* in America. Tragically, political leaders who are beginning to seriously address the United States Government's budget deficit appear to be oblivious to the growing trade deficit. By importing more than we export, the United States is essentially borrowing resources from the rest of the world. But, as Thurow (1990) points out, "sooner or later any nation reaches the end of its borrowing capacity and has sold off the assets that foreigners wish to purchase" (p. 165).

As serious as the balance of trade issue may be, there is another aspect of this *deindustrialization* process that may be of even greater consequence to American society. Sociologists and cultural anthropologists are addressing the problem of unemployment "with a sense of mission not seen since the Great Depression" (Dudley, 1994, p. 83). Newman (1988) speaks of the *downward mobility* that is being experienced by many members of the American middle class. This downward mobility involves not only the loss of income, but the loss of one's place in society: "Occupation is a crucial determinant of social status . . . a job confers prestige and a sense of purpose" (p. 23). Newman also illustrates how downward mobility contributes to "increasing rates of alcoholism, child abuse, and divorce" (p. 134). Finally, Newman expresses concern about the impact of unemployment or underemployment on communities: "Industrial change of the magnitude we are witnessing today is a profound disruption not just of individual lives, but of the values that have long shaped the cultural identity of manufacturing communities throughout the United States" (p. 161).

Relentless competition from foreign manufacturers is a major cause of this deindustrialization of America. The automotive and electronics industries are perhaps the most visible part of America's manufacturing base to be impacted by this onslaught by foreign competitors. No segment of American manufacturing has escaped unscathed, however. There is no question that American manufacturers are under pressure from low wage economies in the Third World. Block (1990), however, contends that the bulk of manufactured goods imported into the United States still come from other developed countries and that "the problems in the U.S. trade balance reflect the growing difficulty of the

U.S. economy in competing with Western Europe and Japan in the production of sophisticated manufactured goods" (p. 19). Thurow (1993, p. 162) provides evidence of America's lack of competitiveness with other industrialized countries by quoting information from the World Competitiveness Report, published by the World Economic Forum in Switzerland. This report ranks 23 industrialized countries in various categories. Rankings for the United States, Japan, and Germany are shown in Table 1.

Table 1. Ranking of competitiveness of business firms in 23 industrialized countries, 1991

Category	Ranking		
	Japan	Germany	United States
Product quality	1	3	12
On-time delivery	1	2	10
After-sales service	1	2	10
On-the-job training	1	2	11
Future orientation	1	3	22

The implication of this data is that the United States is lagging far behind the leaders in terms of the key drivers of customer satisfaction: quality, delivery, and service. America is only average in terms of job training and ranks near the bottom in terms of future orientation. I will have more to say about future orientation later in this section.

The exporting of manufacturing jobs by American firms has also contributed to this deindustrialization phenomenon. Over the last 25 years, American companies have built more than 1,800 manufacturing plants in Mexico (Barlett & Steele, 1992, p. 35). The loss of jobs resulting from foreign investment by American companies has created some unusual responses from trade unions. According to a recent article in The Wall Street Journal (Yokich, 1996), the UAW plans to ask Chrysler to repay its workers for the concessions they made in the

1980s; Chrysler had nearly 7.5 billion dollars in cash at the end of 1995. But, the article suggests, the UAW isn't likely to ask for more money for workers. Rather, they want Chrysler to invest more money in its factories to "bring back some of the thousands of jobs that were lost" (p. B1). The article also reports that the UAW is talking about helping the company become more competitive to help justify the investment.

Another element in the decline of American manufacturing is the fact that the United States Government has not ever had a sustained, aggressive program directed at opening foreign markets. The trade balance is an important indicator but, as Garten (1995) points out, "we need an aggressive trade policy less for the balances than for the jobs and profits they bring. . . . Economically, America needs the jobs that will come with increasing penetration of the world economy" (p. A14).

Others point to the retreat by productive capital into the speculative and financial spheres. Bluestone and Harrison (1982) contend that capital "has been diverted from productive investment in our basic national industries into unproductive speculation, mergers and acquisitions, and foreign investment" (p. 6). This diversion of capital from investment in manufacturing is reflected in the backgrounds of top leadership in large corporations. Fligstein (1987) analyzed the "power shift" between intraorganizational units in the 100 largest U.S. firms during this century. His findings indicate that:

Early in the century, large firms were controlled by entrepreneurs or personnel who came up through manufacturing. In the middle decades, sales and marketing personnel controlled large firms. In the past 25 years, finance personnel have become increasingly dominant. (p. 44)

Similarly, Dertouzos, Lester, and Solow (1989) comment that the executive ranks of American companies "have come to be dominated by individuals with financial and legal skills who know too little about their firm's products, markets, and production processes" (p. 64). In fact, only four percent of the CEOs of *Fortune* 500 companies have backgrounds in production (Thurow, 1993, p. 47). Business Week ("Even American Knowhow," 1986) noted that according to a survey by the Conference Board, "only a third of the nation's 278

industrial largest companies even bother to invite the senior manufacturing executive to top management meetings" (p. 63).

The education system in the United States has responded to this shift in emphasis. According to Barlett and Steele (1992), American colleges turned out more advanced engineering graduates than MBAs during the 1950s. A dramatic reversal of this ratio began during the 1970s, and during the 1980s the number of MBA graduates exceeded the advanced engineering graduates by 320 percent (pp. 99-101). Dertouzos, Lester, and Solow (1989) point out that only six percent of baccalaureates in the United States are in engineering. This compares with 20 percent in Japan and 37 percent in Germany. Samuelson (1990) states that business schools are not improving the quality of American management. To illustrate his point, Samuelson states that between 1963 and 1987 the annual number of MBAs increased from 5,787 to 67,496—there are now more than a million MBAs! But, Samuelson concludes, "the M.B.A. explosion has coincided with a deterioration in the performance and stature of corporate America" (p. 49). The financial orientation of America's corporate leadership is clearly a contributing cause to the United States being ranked near the bottom in the future orientation category in the World Competitiveness Report. "Only Hungary was worse" (Thurow, 1993, p. 162).

Not everyone, of course, agrees that America's industrial base is declining. The United States Commerce Department has come up with a measure of manufacturing *value-added*, which is called the Gross Product Originating (GPO). This data suggests that manufacturing has not declined relative to the overall economy, leading many to conclude that there is no problem in America's manufacturing base. According to Mishel (1990), however, recent studies by the Office of Technology Assessment and the Brookings Institution "have concluded that the GPO series has seriously overstated manufacturing output and productivity growth" (p. 37). Mishel maintains that the erosion in America's manufacturing base that began in the 1970s actually accelerated in the 1980s, and concludes that "the primary reason for manufacturing's shrinkage is the deterioration in our manufacturing trade deficit" (p. 43).

Investment by foreign companies has begun to alter the face of American manufacturing. Japanese, and more recently European, automobile companies have established plants in North America. Honda and Toyota, in particular, have been very successful—not only in the domestic market but in the export of automobiles from North America. In 1995, the combined exports of Honda and Toyota automobiles exceeded the combined exports of GM, Ford, and Chrysler. ("America's No. 1," 1996, p. 113). Foreign companies are also purchasing existing American industries. Business Week ("Even American Knowhow," 1986) noted that the *hollowest* option of all for American companies is "to ax manufacturing altogether and instead serve as the marketing arm for a foreign owned factory" (p. 62). Firestone, for example, regained profitability by selling its radial tire business to Bridgestone and buying tires made in the same factory.

In summary, the major causes of the deindustrialization of America are foreign competition and decisions by American firms to make new plant and equipment investments in countries with lower wage rates. The lack of a coherent and sustained trade policy by the United States Government has further exacerbated the situation. Finally, the financial background and orientation of the current leaders of American companies has caused investment capital to be diverted away from manufacturing.

As I pointed out in the *Prologue*, manufacturing jobs have long provided many Americans with "middle class" incomes. The disappearance of these jobs has caused a major shift in levels of income. In 1950, more than 40 percent of America's jobs were in goods-producing industries, less than 60 percent in service-producing sectors. By the end of 1994, nearly 80 percent of jobs were in service-producing sectors. This shift from relatively higher paying manufacturing jobs to relatively lower paying service jobs has created a profound change in the distribution of wages. Incomes in America are becoming polarized. Average weekly earning in the private sector fell nearly 20 percent (adjusted for inflation) from 1972 to 1994. While the wages of American workers have decreased, executive salaries have continued to increase. From 1979 to 1989 CEO salaries before tax increased 19 percent (adjusted for inflation). Furthermore, because of changes in the tax rates for people earning

high incomes, the corresponding after-tax increase in CEO salaries was 66 percent (Mishel & Frankel, 1990, p. 120-121). The Wall Street Journal (Lowenstein, 1996) recently reported that in the early 1970s, CEOs of large companies "got about 40 times the average American salary," but that by 1994, "the ratio had risen to 187 times" (p. 1C). And the Associated Press recently reported that in 1995 "the average compensation for chief executives of major corporations jumped 23 percent to \$4.4 million" (p. 3A).

The resurgence of American manufacturing

In spite of the willingness of some members in our society to simply write-off manufacturing as some type of relic or artifact, there is a growing awareness that America must reverse the *deindustrialization* process. And a growing number of firms are demonstrating evidence that American manufacturing can excel in world markets.

The Wall Street Journal recently reported that "U.S. steel and auto producers have regained significant ground," and that "after running a deficit in trade of telecommunications equipment from 1983 to 1993, the U.S. boasts a rising trade surplus in that area" (Zachary, 1995a, p. A5).

The Associated Press ("Consumers Find," 1996) recently reported on the increased level of "Made in the USA" labels at the annual Consumer Electronics Show held in Las Vegas. The AP noted that the anecdotal evidence about the growing role in electronics manufacturing had caused economists to notice and quoted the director of industry economics and analysis at Bank of America. "I think back to the mid- to late '80s and the notion was consumer electronics was something we couldn't do," the director noted. "And now, [we have] quite a different story" (p. 12A).

It is no coincidence that the "renewal" of American manufacturing is most noticeable in firms that have advanced production technologies. These firms "are finding it economical to build production facilities in the United States, since labor costs represent a negligible fraction of total costs" (Block, 1990, p. 18). Advanced production technologies are being utilized by a broad range of industries. Business Week ("Why Made-in-America," 1988)

reported that after years of decline, "there are stirrings of a revival in two industries [apparel and textiles] that many had written off forever as a vibrant part of the American industrial scene" (p. 116). Two reasons were given for this turnaround. First, the application of technology, specifically computer-aided design systems. Secondly, American firms have developed the capability to respond quickly to customers' needs, something that is increasingly important as retailers seek to reduce inventories.

The United States government has an important role to play in this budding resurgence. Unfortunately the Clinton administration's pro-trade agenda seems to be losing importance as the 1996 presidential elections near. What could government do? Trade missions for one thing. Garten (1995) states that "Tokyo has been pouring hundreds of billions of export-producing dollars into China, Thailand, Indonesia and other Asian nations" (p. A14). Garten also recommends that the government streamline financing procedures and provide more effective expertise regarding foreign countries and projects. Finally, the United States needs to develop more effective ways to eliminate the various types of nontariff trade barriers used by other countries to keep out American products. Since the subject of the United States' trade policy is beyond the scope of this report, the balance of this section will focus on the types of improvement actions being taken by American manufacturing firms.

In their quest for improvement, many companies have resorted to "quick fix" approaches that may provide short term relief but do nothing to solve the organization's fundamental problems. The leading manufacturing companies in the United States, however, have adopted a long term perspective and have embarked on a continuous renewal journey.

The most common short term action taken by companies in trouble is firing people. Sometimes this is done under the guise of restructuring or *downsizing*. Hammer and Champy (1993) offer suggestions on how to *reengineer* the corporation, and some of these reengineering efforts do offer long term improvements. All too often, however, organizations adopt "slash and burn" methods of reducing wage costs. "Scores of large organizations . . . have sharply cut staffs these past few years. But few have realized the expected cost savings. . . . Costs have even gone up. . . . Performance has suffered" (Ackoff, 1994, p. 43). And even

the best planned reengineering efforts can adversely impact relationships with customers, suppliers, and employees.

Other firms have attempted to improve their competitive position by moving their manufacturing operations from the United States to foreign countries with lower wage rates. This clearly does not remedy America's *deindustrialization* problem. Furthermore, it is not clear at this point whether this strategy provides a long term solution for the company. Subcontracting production to foreign producers will ultimately be detrimental to American manufacturing. "American firms will not be able to control what they cannot produce" (Cohen & Zysman, 1987, p. 261). Companies can achieve lower wage rates by manufacturing in developing countries, at least initially. But even this can be misleading. As Kanter and Stein (1979) observe, calculations of savings in wages are usually made "on the basis of the work people are *supposed* to do, as against what they *actually* do, not to mention what they *could* do [*italics in original*]" (p. 176). Furthermore, sourcing offshore complicates logistics, increases virtually all other costs, and frequently has an adverse impact on customers. And, labor costs for a manufacturing company are typically a very small percentage of total cost. Nonetheless, an increasing number of American manufacturers are moving production offshore. The NBC Evening News (November 20, 1995) reported that five million jobs have been exported by U.S. firms.

Still other companies seek panaceas offered by consultants and authors, a virtual alphabet soup of programs: JIT, MBO, OD, SPC, QFD, MRP, ABM, SDWT and so on. These programs fail to produce lasting results because they do not treat the organization as a complete system.

Several long term renewal strategies have proven effective as manufacturers have endeavored to become more competitive or in some cases to merely survive. These strategies go by different names but involve integrated programs that seek to simultaneously decrease costs and increase revenues. Quality improvement is at the core of most of these renewal strategies. In 1992, Arthur D. Little reported on a survey of 500 executives from manufacturing and service companies. Ninety percent of those surveyed have some form of

quality improvement program in place (Cohen, 1994, p. 27). The most widely recognized term for describing quality improvement strategies that lead to continuous organizational renewal and improvement is Total Quality Management or TQM.

This report is about Total Quality Management. I will explain what it is and what has happened to organizations that have adopted TQM, the good and the bad. The primary purpose of this report is to chronicle the implementation of TQM in the Carter Company. This study provides new perspectives about TQM. The findings in this report have important implications for organizations considering TQM and for organizations already embarked on the journey.

What is TQM?

There is no universally accepted definition of Total Quality Management, and most organizations choose to define TQM in their own terms. Witcher (1995) discusses TQM as an organizational culture-based change program but concedes that "one difficulty is that TQM as an organizational manifestation is still changing and hard to pin down as a defined form (p. 9). Some view TQM as a holistic system of beliefs and values that apply to all aspects of endeavor. At the other end of the spectrum, some organizations use the term TQM to describe methods used to improve manufacturing processes. There is, however, general consensus among practitioners about the key concepts that make up TQM. First of all, as the name implies, TQM is a management system—a radically different system of management. It is based on management leadership, employee involvement, and management by fact. Customers, employees, and suppliers are all included in the *system*. Interestingly, the best known individual in the quality movement, W. Edwards Deming, did not ever acknowledge the existence of the phrase Total Quality Management. When asked about TQM, Deming's typical response was: "The trouble with Total Quality Management . . . is that there is no such thing. It is a buzzword. I have never used the term, as it carries no meaning" (Romano, 1994, p. 22).

Additional perspective about TQM will be provided in Chapter Three, and I have included some of the more comprehensive and contemporary definitions in Appendix B. For now, I would emphasize that TQM is not simply a program that is an adjunct to the normal management process; in organizations that have achieved lasting improvements, TQM has become *the* management system.

The origins of TQM

The concepts and principles of TQM as we know it today were first articulated by A. V. Feigenbaum in 1951. His book Quality control: Principles, practice and administration; an industrial management tool for improving product quality and design and for reducing operating costs and losses is a classic in the field. This work was largely ignored by American management at the time, but Japanese management, inspired by both Deming and Juran, embraced these concepts with an almost religious fervor.

Roberts and Sergesketter (1993) state that "the foundation of TQM is philosophical: the scientific method" (p. 3). Statistics is the essence of the scientific method. The statistical foundation for TQM appeared in Walter Shewhart's (1931) work. Shewhart originated the concept of statistical quality control. W. Edwards Deming was an early disciple of Shewhart and extended this systematic problem solving approach to all aspects of organizations. Joseph Juran also studied under Shewhart. Like Deming, he built on the work of Shewhart, but with a focus on planning and organizational issues.

While much of America's success in World War II was due to the statistical methods developed by Shewhart and others, statistical process control fell out of favor following the war. Complacency on the part of American industry was certainly a factor. "Of all the great prewar nations, only America retained meaningful manufacturing capacity when the smoke of war cleared. Excellence rarely thrives in a competitive vacuum" (Smith & Oliver, 1992, p. 79).

In the 1980s, global competition forced American management to reexamine these concepts. By then, American business was in a quality crisis. Leaders of American business

had failed "to make the connection between quality and such key measures of performance as cost, market share, and profitability" (Bowles & Hammond, 1991, p. 23). To further illustrate this point, a 1984 survey of institutional investors "showed the quality of a company's products to rank last as a factor in influencing stock selection" (p. 23).

Cultural anthropologist Marvin Harris (1981) declared a quality crisis in America. "America has become a land plagued by loose wires, missing screws, things that don't fit, things that don't last, things that don't work" (p. 18). Harris cited a poll showing that 57 percent of Americans were "deeply worried" about poor product quality, and 77 percent felt that "manufacturers don't care about me" (p. 18).

The auto industry provides a macro view of the problems facing American business at the beginning of the 1980s and the contribution of TQM in achieving a turnaround. The depth of the U.S. auto industry problems was portrayed in dramatic terms by Bowles and Hammond (1991). "In 1980 the average twelve-year-old kid with a paper route turned in a better financial performance than America's Big Three automakers Between 1950 and 1980, the U.S. share of the worldwide automotive market had plunged from 76 percent to less than 21 percent" (p. 21).

Deming began working with Ford in 1981. Deming convinced Ford chairman Donald Peterson to hire Bill Scherkenbach, a statistician well versed in the Deming philosophy. This was the beginning of a remarkable turnaround at Ford. Quality truly did become *Job #1*. Deming subsequently worked with General Motors and reportedly orchestrated Bill Scherkenbach's move to General Motors as their quality strategist.

One specific illustration of the effectiveness of TQM in the auto industry is provided by New United Motor Manufacturing Inc. (NUMMI), a joint venture between General Motors and Toyota.

In a plant where labor relations were so bad that it had been closed by GM—NUMMI has received national and international recognition for its world-class quality and innovative approaches to people management. . . . Labor productivity is at least 50 percent higher than at other GM plants. . . . Absenteeism is about two percent, versus

nine percent at a typical GM factory. . . . 85 percent of NUMMI's employees worked at the Fremont plant before the joint venture was created. (Bowles & Hammond, 1991, p. 185)

TQM had returned to America. The Malcolm Baldrige National Quality Award, established in 1987, represents the United States government's endorsement of quality as an essential element of business strategy. "The award recognizes companies for business performance excellence and competitiveness improvement. . . . Results reported need to address all stakeholders—customers, employees, owners, suppliers, and the public" (Malcolm Baldrige, 1996, p. 2). TQM applies to government and education as well as to business. Kline (1993) reported that 12 state governments have now implemented TQM statewide. Arkansas is one of those states, having enacted legislation to adopt TQM in 1989. Then-governor Bill Clinton also promoted TQM to the business community in Arkansas. As he put it in a 1991 speech:

Change is never easy and undertaking a new management philosophy is hard work. But I have seen the difference quality management can make. I encourage every company in Arkansas to become involved—immediately—to ensure a bright future for our state.

The debate about TQM

In spite of the current popularity of TQM, a great debate is raging. Is it the wave of the future, or as the headline of a cover story in a recent edition of USA Today asked, "Is TQM dead?" (Moore, 1995, p. 1A). Does TQM work? The anecdotal evidence of the success of TQM is overwhelming: Ford, Xerox, Motorola, the list goes on. But what about empirical evidence? In the following sections, I will present the arguments on both sides of the debate.

Evidence supporting the effectiveness of TQM

The United States General Accounting Office (1991), reviewed 20 companies that were among the highest-scoring of the 1988 and 1989 Malcolm Baldrige National Quality

Award applicants. The General Accounting Office (GAO) concluded that companies adopting TQM practices did show an overall improvement in corporate performance. The findings indicated that (1) better employee relations were realized, (2) improved quality and lower costs were attained, (3) greater customer satisfaction was accomplished, and (4) improved market share and profitability were attained (pp. 2-5). The GAO also observed that many different kinds of companies benefited from TQM practices, but that "none of the companies reaped those benefits immediately" (p. 3).

Shetty (1993) used results from the GAO study and data from selected firms that received the Baldrige award to conduct a "systematic" study of the impact of TQM on the performance of these companies. He concluded that "companies that have adopted total quality management practices experienced an overall improvement in business performance" (p. 39). He also indicated that "quality improves a firm's competitiveness," and that "quality confers cost advantages and fosters customer loyalty" (p. 39).

An empirical study by Becker, Golomski, and Lory (1994) focused on a sample of companies who applied for the Baldrige Award prior to 1991. The sample included 30 firms representing 25 industries. Most of the companies had revenues of \$100 million or more. The results of these companies for the seven year period 1986 to 1992 were compared to U.S. companies in general. During that seven year period, "manufacturing revenues in U.S. companies increased 29.3 percent The TQM [sample] firms nearly doubled that percentage increase in revenue" (p. 23). Interestingly, the sample companies reported a decrease in employment while U.S. companies in general increased employment levels. In summary then, "the sample companies doubled total U.S. increases in revenues and decreased employment by a relative 15 percent compared to all U.S. manufacturing during the same time period" (p. 23).

Lewis Platt, Hewlett Packard's Chairman, President, and CEO states that "TQM has helped save H-P \$800 million in warranty costs during the decade, not including the tens of millions of dollars that we saved through process improvements in manufacturing, marketing and field support." "TQM is vital to the future success of H-P," Platt concluded. (Romano,

1994, p. 23). In like manner, John Pepper, Chairman and CEO of Proctor & Gamble Co., states that "total quality is the most significant and pervasive intervention I've seen in my 32 years at Proctor & Gamble" ("TQO Researchers," 1996, p. 5).

Evidence to the contrary

But not all of the Baldrige winners are successful. The Wallace Company was a 1990 winner of the Baldrige Award. Yet in 1991, there were indications that the company could face bankruptcy. "Overhead costs to make the quality improvements soared above \$2 million a year and that the real troubles began when customers balked and canceled orders after Wallace raised prices" (Ivey, 1991, p. 40). In 1992, the Wallace Company filed for protection under Chapter 11 and was subsequently acquired by Wilson Industries (Hill, 1993, p. 75).

Mahajan, Sharma, and Netemeyer (1992) take issue with the GAO claim that there is a cause and effect relationship between the TQM practices measured by the Baldrige Award and performance of the company. They argue that the GAO study is "not a longitudinal study and cannot respond to the question of whether the Baldrige Award is a gauge of the financial success of a firm" (p. 333). Mahajan et al. conducted a longitudinal study of 12 "excellent" firms and concluded that "excellence of a firm is not an indicator of its future performance" (p. 330). Based on those findings, they ask the question: "Should we expect the Baldrige Award to be an accurate predictor of the financial success of a firm? . . . The answer is no" (p. 332).

Another potential pitfall is illustrated by the experiences of Florida Power & Light (FP&L). In 1990, FP&L was extolled in the trade press: "The utility became the first company outside Japan to win the prestigious W. Edwards Deming Prize for outstanding achievement in the process of quality-control management" ("Fear That," 1991, p. 23). Just two years later, FP&L's new chairman found that many employees believed that the "quality improvement process had become a tyrannical bureaucracy," and that "undue emphasis on process deprives them of time that could be better spent serving customers" ("Downside of Quality," 1992, p. 11).

Earlier in this chapter I noted a 1992 Arthur D. Little survey of 500 executives which indicated that 90 percent of the companies have some form of quality improvement program in place. Yet only about one third of those polled believed that their company's efforts had a significant impact on their competitive position. Similarly, a 1992 study by Mckinsey & Company found that "two thirds of quality programs fail to yield any real improvements" (Cohen, 1994, p. 27).

In search of veracity

One of the conclusions we might reach from the evidence presented in the two preceding sections is that, at least to some degree, the success attributable to TQM is in the eye of the beholder. In support of the efficacy of TQM, companies that scored highest on the Malcolm Baldrige criteria reported that they experienced an improvement in performance; empirical studies conducted by members of academia suggested that Baldrige Award winners generated better results than other firms, and Hewlett Packard's Chairman stated that "TQM is vital to the future success of H-P."

On the other side of the issue, not all of the Baldrige Award winners are successful; some researchers question the results reported by the GAO because it was not a longitudinal study; FP&L's quality process has become a "tyrannical bureaucracy," and only one third of companies polled by Arthur D. Little believed that their quality improvement efforts had improved their company's performance.

There is some truth in all of the arguments we have reviewed in this section. Perhaps the following will help to place the debate in perspective. Researchers (Gill & Whittle, 1992) at the Sheffield Business school in England portray TQM as simply the latest in a series of consultant-led approaches to organizational effectiveness. The authors trace the life-cycles of Management by Objectives (MBO) and Organization Development (OD) and then focus on TQM. "In particular we focus on the latest fashion, TQM, to try to account for the transitory nature of much managerial activity which seems to proceed from deep disillusionment with one panacea that has run its course to high enthusiasm for the next" (p. 282). Ackoff (1993)

makes a similar observation: "The US is panacea prone; it has more panaceas than problems and currently the most popular one is TQM" (p. 66).

What these comments suggest is that organizations are continually in search of a cure-all, a universal remedy to all of the organization's problems. I suggest that this mind-set can cause TQM to become an emotion-laden issue. Some individuals embrace TQM with an almost religious fervor; whatever goes right can be attributed to TQM, whatever is wrong can be remedied by demonstrating a stronger commitment to TQM. Other individuals are skeptical; as soon as problems arise, they are more than willing to conclude that TQM does not work.

The purpose of this study

There are obviously many unanswered questions about the effectiveness of TQM. Because TQM refers to a comprehensive, organization-wide management system, there are many facets that might be investigated. Johnson (1993) suggests that implementing TQM is like putting a puzzle together (p. xiv). Each facet of the implementation can be thought of as a piece of the puzzle; none can stand alone, and all must interlock with the other pieces to produce the complete picture.

I chose to focus on the quality improvement team aspect of a TQM implementation. My previous experience and study suggested that using interdepartmental teams to solve problems in a "TQM environment" might help in reducing the level of conflict between departments. The use of cross functional quality improvement teams is one of the basic building blocks of TQM transformations (one of the pieces of the TQM puzzle). I was interested in how the use of such teams might influence the TQM transformation process. My initial objective was to investigate the ways in which these teams might serve to break down organizational barriers. This report will address that issue. The main focus of the study, however, changed as a result of what emerged during the investigation.

The findings provided some support for my original supposition that cross functional quality improvement teams serve to break down barriers between departments. On the other

hand, I discovered that barriers between management and workers actually increased during the TQM implementation at the Carter Company. At the beginning of the TQM implementation, some workers were enthusiastic, others were skeptical. At the end, most of the workers were cynical.

The findings presented in this report have important implications for organizations considering TQM and for organizations already embarked on the journey. My purpose is to bring a fresh perspective to the TQM "debate." One of my objectives is to illustrate ways in which cross functional quality improvement team experiences served to increase the level of trust and understanding between team members from different departments. I will also explain where the TQM implementation went wrong at the Carter Company so that other organizations can avoid these implementation pitfalls.

The selection of the Carter Company for the study

The Carter Company was selected as the site for this study for several reasons. I wanted to find a company that met the following criteria:

- A top management that was deeply involved with the TQM implementation process.
- An organization that had utilized the services of an outside group to provide education and facilitation.
- A TQM initiative that had been in place long enough to have impacted the organization.
- A TQM process that utilized cross functional quality improvement teams. A further requirement was that at least two teams had to have completed their assignment. An additional desire was that the two teams would have some degree of "contrast."

The Carter Company met all of these criteria. The owner verbally supported the TQM initiative and had committed extensive resources to the implementation; an outside

organization, the TQM Institute² (TQMI), provided both education and facilitation services; the TQM process had been in place for two years, and the first two teams had completed their assignments. And, as we will see, the teams clearly provided the desired "contrast."

Conducting the investigation

I began my study in the spring of 1995, just 24 months after the Carter Company had begun their TQM implementation. Since my purpose was to investigate change in the broad context of organizational culture, I chose to use a qualitative research paradigm. Qualitative methods are well suited to the study of complex systemic changes in organizations. My primary method of collecting data was interviewing.

The interview process began with the Carter Company's management. My objective was to gain an understanding of management's collective vision regarding the company's culture and their opinions about the TQM process at Carter. Next, I interviewed the team leaders of the two teams chosen for the study to gain their perspectives on the team process and on the various team members. I then conducted group interviews with members of the two teams. I also interviewed workers who had not served on a team. And finally, I interviewed the two individuals from TQMI who had been involved with the Carter Company's TQM initiative. I made extensive use of follow-up interviews.

The majority of the data was collected over a three month period. I did, however, continue to conduct follow-up interviews throughout the write up phase of the study. A more detailed account of the methods I used in this investigation is provided in Appendix A.

The researcher: Background and biases

Recognizing that no research is value free, I want to provide my readers with some information about my background and biases. I undertook this study as a doctoral candidate in the Department of Industrial Education and Technology at Iowa State University. I hold a bachelor of science in Mechanical Engineering from the University of Missouri (1958) and an MBA from Pepperdine University (1977). Prior to entering the doctoral program, I held a

² The TQM Institute is also a pseudonym.

variety of positions in a major global corporation over a 35 year period and was instrumental in the implementation of a company wide TQM initiative.

Having witnessed the negative impact that coercive, authoritative management styles have on organizations, I have a strong bias in favor of participative, coaching management styles. Based on my experience, the leaders of an organization must develop an environment of trust and mutual respect in order to achieve the participation that is essential to successful TQM initiatives.

My interest in investigating cross functional quality improvement teams is derived from my observations of the deleterious effects of interdepartmental conflict. Starting out as a design engineer, I experienced the frustration of being stereotyped as part of a department that was deemed "out of touch with customers and the realities of production." I also observed engineering management's quest to maximize their resource and power base without regard to the overall objectives of the organization. Later, as a plant manager, I was dismayed by the pervasiveness of interdepartmental conflict, the "empire building," and the lack of regard, on the part of many department managers, for overall plant performance. Still later, as a member of senior management, I encountered this same type of political infighting between different world areas, functions, and business units.

As a result of these experiences, I am keenly interested in investigating how TQM initiatives might lead to more participative management styles, a reduction in the level of conflict between departments and between different levels of the organizational hierarchy, leading to improved performance for the organization, and an improved quality of work life for all employees.

Finally, I need to explain my association with TQMI. I have conducted training and development sessions using TQMI materials and methods. I have not worked on behalf of TQMI at the Carter Company, nor was I known to anyone at the Carter Company prior to initiating the study.

A look ahead

In Chapter Two, I provide an overview of the Carter Company, its history, and its management structure. I will also introduce the key members of the Carter Company's management team. In Chapter Three we will examine how the Carter Company actually implemented TQM. Chapters Four and Five describe the two cross functional quality improvement teams that I studied. In Chapter Six I will highlight the perceptions of various groups of participants. Chapter Seven provides an overall summary of the study and recounts significant events that occurred in the Carter Company after the study began. In Chapter Eight, I discuss major implications of this study and offer recommendations for further research.

CHAPTER TWO: THE CARTER COMPANY

*Quality was the cornerstone of the company
from the very beginning.*

Ken Carter, great-grandson of the founder

The Carter Company was in trouble. Harold Miller³ had purchased the century old company from the founding family in 1988. Now, as he reviewed the 1992 results he was perplexed. After gaining control of the company, Miller had invested heavily in state of the art equipment and consolidated operations in an effort to improve performance and reduce redundancy. He had also replaced much of the stodgy management team inherited from the previous owners, provided extensive management training for supervisors, and implemented personnel policies and operating procedures to provide appropriate controls. Yet the trend was unmistakable. Sales were down and costs were up. The Carter Company had lost money in 1992—the first loss in the history of the company! A major change was needed.

Miller was active in industry association work and knew that leading companies in his industry were adopting a new philosophy, something they referred to as Total Quality Management. Actually they seemed to prefer to use the acronym TQM. Executives from these companies spoke regularly at industry forums about how their TQM programs had produced major improvements in their organizations. Miller carefully weighed the pros and cons and ultimately decided to proceed with the implementation of TQM. Having made the decision, he moved quickly. The Carter Company needed help and they needed it fast. His first step was to contact the TQM Institute (TQMI). Miller had been impressed with TQMI presentations at industry association meetings. And TQMI had a good reputation in the industry. TQMI agreed to start the implementation process immediately.

Chapter Three will trace the TQM implementation as it unfolded in the Carter Company. To place this TQM initiative in perspective, the balance of this chapter will

³ The names of people, places, and companies in this report are all pseudonyms.

describe the Carter Company: its origins, its growth and development, and its current management.

An overview

The Carter Company produces manufactured machined parts for a wide variety of industries. The Carter Company was started in 1879 in Olivia, a small midwestern city that currently has a population of 100,000. In 1963, the Carter family acquired the Stevens Company. Stevens also produces manufactured machined parts, but has somewhat different capabilities and serves a different geographic area. Stevens is located in Jamesport, a city of similar size, located 100 miles away.

The Carter Company's original plant became known as the *Home Plant*, and the Stevens Company plant became known as the *Branch Plant*. Although both plants operated under the Carter banner, each retained its own individual style and culture. The Home Plant accounted for two-thirds of the total production of the company, the Branch Plant one-third. At the time I began this study, the Carter Company employed 165 people and had annual sales revenues in excess of \$20 million. None of the Carter Company employees was represented by a trade union. I was struck by the fact that there were no African-American or Hispanic employees in either plant even though there were significant minority populations in both Olivia and Jamesport.

Some of the participants in this study had been employed by the Carter Company for 30-40 years and were rich sources of information regarding the history of the company. I was also able to interview Ken Carter, great grandson of the founder. Carter told me that he began working in the company on a part time basis when he was in high school (1940), became president in 1970, and was active in the company until 1991.

The origins, growth, and expansion

The Carter Company was started by Herman Carter, a master craftsman, who built the business by developing a reputation for quality and reliability. "Quality was the cornerstone of the company from the very beginning," Ken Carter told me, "and customer deadlines were

considered sacred regardless of the cost to the company." That legacy was handed down from generation to generation. The Carter Company's employee handbook proudly proclaims that, throughout the company's growth and expansion, it "never departed from the long-established pride in a quality product."

The Carter family retained ownership of the company, and succeeding generations managed the growing enterprise. According to the history of the Carter Company provided in the employee handbook, the third generation of the Carter family began active participation in the company soon after World War I. "Mr. Earl," as he was referred to by employees, was the company's president for many years, finally stepping down because of poor health in 1970. "My father was a hands-on operations person," Ken Carter related, "*a master of the craft, who took great pride in doing it right.*"

Like many manufacturing companies in America, the Carter Company enjoyed substantial growth in the 1950s and 1960s. "We started a real growth [period] in about 1960," a long term employee related. "I think that was when we hit our first million dollars . . . and we just kept growing from there."

By 1963, the Carter Company was ready to expand outside of the geographic area it had traditionally served. Earl Carter knew that a competitor, the Stevens Company, was looking for a buyer. A purchase was soon negotiated, and the former Stevens Company became the Branch Plant of the Carter Company.

The Stevens Company was started in 1954 by Harry Hanson and two partners. The two partners did not last long. "Within 30 days, I was on my own and I didn't have any money," Hanson told me. "After a year of struggling, my brother-in-law, James Stevens, loaned me some money and became my partner." After operating the business for nine years, Stevens decided he wanted out. Since Hanson did not have the money to purchase his partner's share, he was forced to sell the Stevens Company to the Carter family.

Reaching maturity

The Carter Company enjoyed a long period of stability. From a worker's vantage point, the company was a utopia. The company paid the highest wages in town and provided excellent working conditions. There were no layoffs. When times were slow, workers were given time off with pay, with the understanding that they would give back the time when business picked up again. Coworkers developed close friendships with each other.

There were major differences in the way the Carter Company's two plants developed. The plants had different cultures from the very beginning, and for most of the time following the Carter Company's purchase of the Stevens Company, the two plants were operated as completely separate entities. Much of the difference in the cultures of the two plants can be traced to the founders of the respective companies: their objectives and goals and their orientation toward employees.

The cultures of the two plants continued to diverge after the purchase of the Stevens Company by the Carter family. The Home Plant was the company's "headquarters." The Carter family had direct involvement in the operations at the Home Plant and virtually no involvement in the Branch Plant. One of the implications of the location of headquarters was that most of the company's investment in new equipment was for the Home Plant. There was virtually no investment in new equipment for the Branch Plant, although the operations were moved to a larger plant in 1980. "When I came here," Harold Miller related, "the Branch Plant had all hand-me-down equipment [from the Home Plant]."

Since the difference in the cultures of the two plants is an important element in understanding the Carter Company's TQM initiative, I will elaborate on these differences in the next two sections.

The Home Plant

From the very beginning the primary focus of the Carter Company's Home Plant was on producing a top quality product. The Carter family believed that loyal employees were essential, and they operated the company in a very paternalistic manner. The Carter family

was revered by the workers at the Home Plant. Twenty-five years after he had retired, employees still spoke fondly of Ken Carter's father. "Mr. Earl—that's what everybody called him—was pretty generous when it came to the end of the year bonuses," was a typical comment.

Ken Carter, who became president in 1970, was a hands-off type of manager. The power resided in the operations manager, Charles Rector. The Home Plant had traditionally been *production* driven, e.g. manufacturing had been the dominant function, and sales people were considered a necessary evil. "The plant was run by Charles Rector [when I came here]," Miller told me. "He was the only one who had all the answers." Over time, the Home Plant sales manager convinced Miller that Rector was too focused on production and would not respond to urgent customer needs. "That [allegation] was unjust," another manager told me. "When required, he [Rector] would work in [find room in the production schedule for] a customer's job . . . just not to the extreme of sacrificing other customers [needs]."

The Home Plant had virtually no turnover, and loyalty was exceptionally high. A job with the Carter Company provided virtually "life-time employment." Because the Home Plant was also the "headquarters" for the company the environment was politically charged and the managers developed a tendency to be politically correct; there was more focus on "looking good" than on taking care of customers or listening to employees.

The Branch Plant

Harry Hanson, the founder of the Stevens Company, was a salesman. "I liked selling," he told me during our discussion, "but I couldn't make enough [money] working in retail sales to support my family, so I started this business." The focus of the Branch Plant was always on taking care of the most critical customer requirements. The workers in the Branch Plant took pride in getting the job done, regardless of what it took.

Harry Hanson continued to manage the Branch Plant after it was purchased by the Carter Company, but as he related, "I was also active in sales." Soon after Ken Carter became president in 1970, he and Hanson had a major disagreement about how to run the plant.

Hanson told me that he was going to leave the company, "but Ken made me a pretty good proposition, and I went into sales full time." Carter hired John Berger to replace Hanson as the Branch Plant manager. Berger turned out to be an alcoholic who spent very little time in the plant. As a practical matter, Hanson still ran the plant. Ken Carter exhibited little interest in the Branch Plant operation.

Turnover at the Branch Plant was much higher than at the Home Plant. Harry Hanson was not concerned with employees, only customers. People who did not perform were terminated without hesitation. "People knew that job security was not tied to seniority, but to job performance," one manager related. The Branch Plant employees took a great deal of pride in what they accomplished and had a definite "can do" attitude. "We have some proud people around here," one worker told me, "proud of what they do and how well they do it."

The Carter family decides to sell: 1984

Neither of Ken Carter's children had any interest in the business. There were opportunities to sell the business to larger competitors, but Carter elected not to take advantage of those opportunities. His concern was that some of his loyal employees might not be treated fairly by the acquiring company. Instead, he looked for an individual who was interested in buying the Carter Company and continuing to manage it in a way that was in keeping with the Carter family tradition.

Carter approached Harold Miller, manager of a plant owned by Megacorp, to join the Carter Company as president. Carter had known Miller's father through industry association work. Carter and Miller had an understanding that after a few years, Miller would be given the opportunity to purchase the Carter Company on a long term buy-out arrangement if he had by then demonstrated the capability to manage the company. Miller joined the Carter Company in 1984 and assumed responsibility for day-to-day management of the company. Ken Carter soon became little more than a figurehead, corresponding with major customers and industry association groups.

When Miller joined the Carter Company, annual sales revenues were \$14 million. The limitation at that time was capacity. In 1985, Miller began to add capacity. This enabled the company to grow to the \$20 million sales revenue level. The city of Jamesport even issued an industrial revenue bond to provide financing for the Carter Company's expansion in the Branch Plant. The problem was that the company did not have the capability to pay for the additional equipment. As the Carter Company's Vice President of Finance told me:

Mr. Miller was very aggressive. He felt like we needed more equipment. We took on more debt to acquire that equipment. I often felt that he had a Megacorp mentality—that he could keep going back to the bank to borrow more. There was never a payback. There was never a period where we could pay that [debt] off and pocket some profits.

In 1986, Miller hired Robert Andrews, one of his former associates in Megacorp, to replace John Berger as manager of the Branch Plant, otherwise the company continued to operate much as it had under the Carter family.

Harold Miller takes over: 1988

By 1988, Ken Carter was satisfied that Harold Miller had the capability to manage the Carter Company, and he was ready to phase out his active participation in the company. Miller became the sole owner of the Carter Company. Ken Carter continued as a director of the company since the Carter family had provided the long term financing that Miller needed to acquire the company.

One of Miller's first actions after purchasing the company was to bring his wife, Betty Miller, into the company as the director of human resources, a new position. Since he was schooled in the traditions of the highly centralized Megacorp, Miller was anxious to implement formal systems and procedures to insure appropriate control and uniformity. At that time, Betty had just received a BA degree from a small college in Olivia, and Harold believed that she could assist in the implementation of these systems and procedures.

On the operations side, Miller moved Charles Rector out of his role as production manager of the Home Plant and promoted Robert Andrews to Vice President of Manufacturing for the entire company. This was Miller's first step toward consolidation of two plants. Miller and Andrews began to make the plants interdependent by placing unique machinery and equipment in each of the plants. This meant that the plants frequently needed to utilize equipment in the other plant to complete an order. From the very beginning there seemingly had been competition, conflict, and lack of trust between the plants. Making the plants dependent on each other only exacerbated the situation.

At the beginning of 1994, Miller decided to consolidate reporting of expenses and revenues for the two plants. Miller's intention was to reduce the level of competition between the plants. The result was just the opposite; the level of mistrust and conflict actually increased. Consolidating the results also made it difficult for management to have meaningful measures of the performance of the individual plants; the only measures available were indirect indicators like machine utilization.

After Rector was forced aside, Nick Tasler, the Home Plant sales manager, became the dominant individual in the Home Plant. Tasler was able to dictate production schedules for specific customer orders without regard to manufacturing requirements. The plant people I talked with characterized the Home Plant environment as *sales* driven rather than *customer* driven because they were convinced that sales people did not really know what the customers required; the sales people just wanted everything done fast! "Rector got pushed aside because he stood up to unreasonable demands [by sales people]," one manager told me. "After he moved out of that job, we became totally chaotic."

The Branch Plant was customer driven from the very beginning. Harry Hanson had spent the majority of his time with customers, and he knew what they required. Even after Hanson was replaced as plant manager, he was able to influence, sometimes very directly, plant schedules to meet customer requirements.

There was never any consolidation of the Carter Company's sales activities. The plants continued to serve their respective geographic areas and market segments. In spite of

Miller's attempts at establishing common cultures and *modus operandi*, the two plants continued to develop independent cultures, and the level of conflict between the plants continued to escalate.

Miller spent much of his time on community activities. And the time he spent on Carter Company business was focused primarily on the Home Plant. Like his predecessor, Miller spent very little time at the Branch Plant.

The TQM period: 1993-1995

The TQM implementation will be covered in the next chapter. While the TQM initiative had the greatest influence on the Carter Company's evolving culture during this time period, there were some events not related to the TQM implementation that had an impact on the employees' perceptions of the Carter Company.

One of the actions not related to TQM during this time was Harold Miller's decision to "undo" the equipment specialization by plant that he and Andrews had implemented earlier. This action was taken in 1995 after it became obvious that the high level of conflict between the two plants made it impossible for them to operate on an interdependent basis. "Too much internal conflict," was one manager's description of the situation. I will comment about the way this transition was handled, and the employees' reaction to, it in Chapter Three.

1994 also brought the first layoff in the history of the company. Sales volume declined in 1994 after having been flat for the previous six years. "The past few years we have really been struggling to be competitive," Miller's wife told me. The Carter Company had traditionally granted a pay increase each year on the employee's date of hire anniversary. In early 1994, a wage freeze was implemented that was extended through 1995. The company's 401K (retirement plan) contributions were reduced in 1994 and completely eliminated in 1995.

Following the layoff, the company adopted a tactic used by many U.S. companies: the use of "temporary" employees. These temporary workers did not have the experience and skills of the employees laid off, but they were paid much lower wages and did not receive any

of the "benefits" afforded to permanent employees. It was clear that the Carter Company consciously decided to use these "temporaries" in place of the permanent employees they replaced. "We've had the same temporary person for two years," one manager told me, "and some of them almost 2000 hours a year." Further reductions in the number of "permanent" employees were made during the time that I was collecting data.

The layoff changed the way employees viewed the company. The following comment is typical of many that were voiced by Carter Company employees: "Before they [the Millers] bought the business . . . you didn't get laid off. . . . Now, there's no loyalty to the people."

In the following sections, I will introduce the Carter Company's key managers, and then I will describe the organization structure that was in place during the TQM implementation.

The managers

This section provides a brief commentary on each of the managers included on the organization charts displayed in the next section. Additional perspectives on these individuals will evolve as the narrative unfolds in subsequent chapters.

Harold Miller, owner and president: Miller was very articulate and seemed to enjoy philosophical discussions. On the other hand, he was very shy. He did not enjoy contact with customers, and he was not comfortable in dealing with employees on an individual basis. Most of his communication with employees was in writing or by speaking from a prepared text. "He always seemed like he was nervous around everybody," one employee told me. One of the managers likened Harold to a puppeteer; he stayed behind the scene and pulled the strings. Miller received an undergraduate degree from a technical college and later earned an MBA degree. Harold seemed to have a keen interest in computers and their application to both management information systems and computer-aided-design. Before buying Carter, Miller had worked in a metal fabrication plant owned by Megacorp, a huge corporation that had a very rigid hierarchical structure. The plant where Harold worked was a captive shop, that is, all of their output went to Megacorp's assembly plants. Since all of the production of

the plant where Miller worked went to the parent company, he did not have any experience in dealing with customers before coming to the Carter Company. Furthermore, Megacorp's rigid hierarchical structure made it unnecessary for him to learn to relate to employees. Harold was very active in community affairs and he expressed to me his belief that this type of involvement was an essential part of his responsibility as head of the Carter Company. From what Miller and other managers told me, I gained the impression that he spent more time and energy on community affairs than on running the company. Harold joined the Carter Company as president in 1984 with the understanding that he would purchase the company from the Carter family in a few years. He became the sole owner of the Carter Company in 1988.

Betty Miller, wife of the owner and director of strategic planning: Betty joined the company in 1988 when Harold became the sole owner. Her initial assignment was director of human resources. Betty expressed disappointment that the Carter Company managers did not come forward with their "visions" for the company. "She felt like the boss and his wife were the owners, and everybody else should be making all the decisions and coming up with the visions," one manager told me. "And yet I never felt like she's given us the tools or the opportunity to really do that." Betty was very outgoing and was always anxious to become involved although she did not necessarily want to deal with tough issues. As one manager put it: "She seemed to float in and out whenever it was convenient." Betty also had a tendency to act on the basis of limited information. "She's getting better at it," another manager told me. "But she used to come in and really stir things up without knowing all the facts."

Nick Tasler, vice president of sales for the Home Plant: A 25 year veteran with the company, Tasler was the consummate corporate politician. Tasler was held in high esteem by Harold Miller. He was the only Carter Company employee ever to be given the opportunity to attend a summer program at a prestigious university. He was all style and no substance. "Very flashy, very presentable, very convincing," as one manager described him. "Nick was an excellent salesman," another member of management told me. "[But] he lost a lot of confidence of his subordinates when he was caught lying and being deceptive." He related

very well to Harold Miller; not at all to anyone in the production side of the business. His attitude toward production people might best be illustrated by what one of his subordinates related to me. "Nick Tasler . . . was saying that there's a lot of errors out in the plant, [and] that's just because people are not doing their jobs [Employees] purposefully didn't care and were doing a bad job and they were going to be punished for it."

Joe Harris, vice president of finance and human resources: Before joining Carter some 15 years ago, Joe had been in public accounting, and the Carter Company had been one of his clients. Harris was a member of the corporate management group. He was in a unique position in that he was not only privy to all aspects of the Carter Company's business, but also to the personal financial arrangements between the Millers and the Carter Company. In spite of his position, he was unable to exert any real influence on the organization. He was in no man's land; perceived by plant people as a member of corporate management, yet not part of the "inner circle."

Harry Hanson, sales manager for the Branch Plant: Harry was one of the founders of the Branch Plant in 1954. Harry then served as general manager of the Branch Plant for seven years after it was acquired by the Carter Company. Following a disagreement with the owner of the Carter Company on how the Branch Plant should be run, he threatened to resign. Fortunately for the Carter Company he was persuaded to stay on as sales manager. Hanson made a pretext of managing the other four sales people in the Branch Plant, but what he really liked to do was sell. Furthermore, his compensation was based solely on what he personally sold. "I've got to sell before I get paid," Harry told me. And Hanson single-handedly sold the majority of the work produced at the Branch Plant. As a result of Harry's sales prowess, the Carter Company was overly reliant on him. He capitalized on this by managing his bosses, including Harold Miller, by intimidation. Hanson had a love-hate relationship with people in the plant. On the one hand, everyone recognized that they were dependent on him to get orders. On the other hand, he intimidated everyone in the plant. "He can just tear the production department apart," one manager related. "He just comes in and rants and raves

and blows right through every department to make sure that his jobs get herded through there."

Frank Simms, production manager for the Home Plant: Simms could best be described as a "good soldier," defending the actions of the owners and following their dictates without question. Even though he came up through the ranks during a career that spanned 28 years with the company, he was not well liked by the employees, nor did he have a good relationship with the sales organization. One manager described Simms as "very honest and very dedicated to the Carter Company." "Frank is good at meeting deadlines," one manager told me, "[but] he's too blunt." This description was echoed by another manager. "Even though his intentions were very good," she told me, "his lack of tact kind of got him in trouble." The TQMI facilitator observed that Simms had a very authoritative management style and that he "never led his people in the use of TQM tools."

Robert Andrews, vice president of manufacturing and general manager of the Branch Plant: Robert was hired two years after Harold Miller joined the Carter Company. Andrews and Miller had worked together at Megacorp. Andrews epitomized the "organization man" of companies like Megacorp. "He had the old management philosophy of scaring the crap out of the troops and that was his motivational factor," one manager explained. "And yet he would say, 'I'm a people person . . . and I'm going to communicate well and give praise.' Then he went back out and said, 'You guys aren't doing the job; do it or get out.'" All information about Andrews was provided to me by others since he left Carter just before this study began.

Marshall Ingram, production manager of the Branch Plant: Marshall began working for the Stevens Company on a part time basis when he was in high school in 1958, and was unique in the Carter managerial ranks. Perhaps the best way to characterize Ingram was as a cowboy; he liked to wear blue jeans and cowboy boots, and his personality matched his attire. He was exceedingly direct and had the respect of all the production employees in the Branch Plant. His direct manner even carried over to the Carter Company management meetings. "He was probably the most outspoken person in management meetings," one of his peers told

me. "And yet he did it in a fairly tactful way. He kind of cut through a lot of the modern day fluff in terms of all the stuff that Betty [Miller] talked about sometimes."

The Carter Company managers represented an interesting mix of personalities and management styles. Harold Miller, the president and owner, preferred to operate behind the scene. Betty, on the other hand, liked to get involved in a wide range of activities. Nick Tasler was the best politician of the lot. Robert Andrews was political in that he talked a good game but kept a low profile. Most of the managers were astute enough not to take a position contrary to that expressed by the owners. Marshall Ingram was an exception. He would speak his mind regardless of the situation. Harry Hanson was truly unique. His position was secure because he single-handedly sold most of the business booked by the Branch Plant. Hanson did not ever openly disagree with the owners; he just proceeded to do whatever he thought needed to be done.

In Chapter Three we will see how this cast of characters acted out the TQM implementation at the Carter Company.

The organization structure

Like most companies, the Carter Company had both a formal and an informal organization. The formal organization reflected assigned job responsibilities. The informal organization reflected how the organization actually operated. As we will see, this type of disparity can lead to confusion and ambiguity.

The formal organization

The formal organization that was in place at the Carter Company when I began the study is depicted in Figure 1. This organization reflects the existence of two separate and distinct plants. It also indicates that Miller had attempted to achieve some degree of rationalization in manufacturing. The following will help in understanding how the organization was supposed to work. Only three people reported directly to Harold Miller: Robert Andrews, Nick Tasler, and Joe Harris.

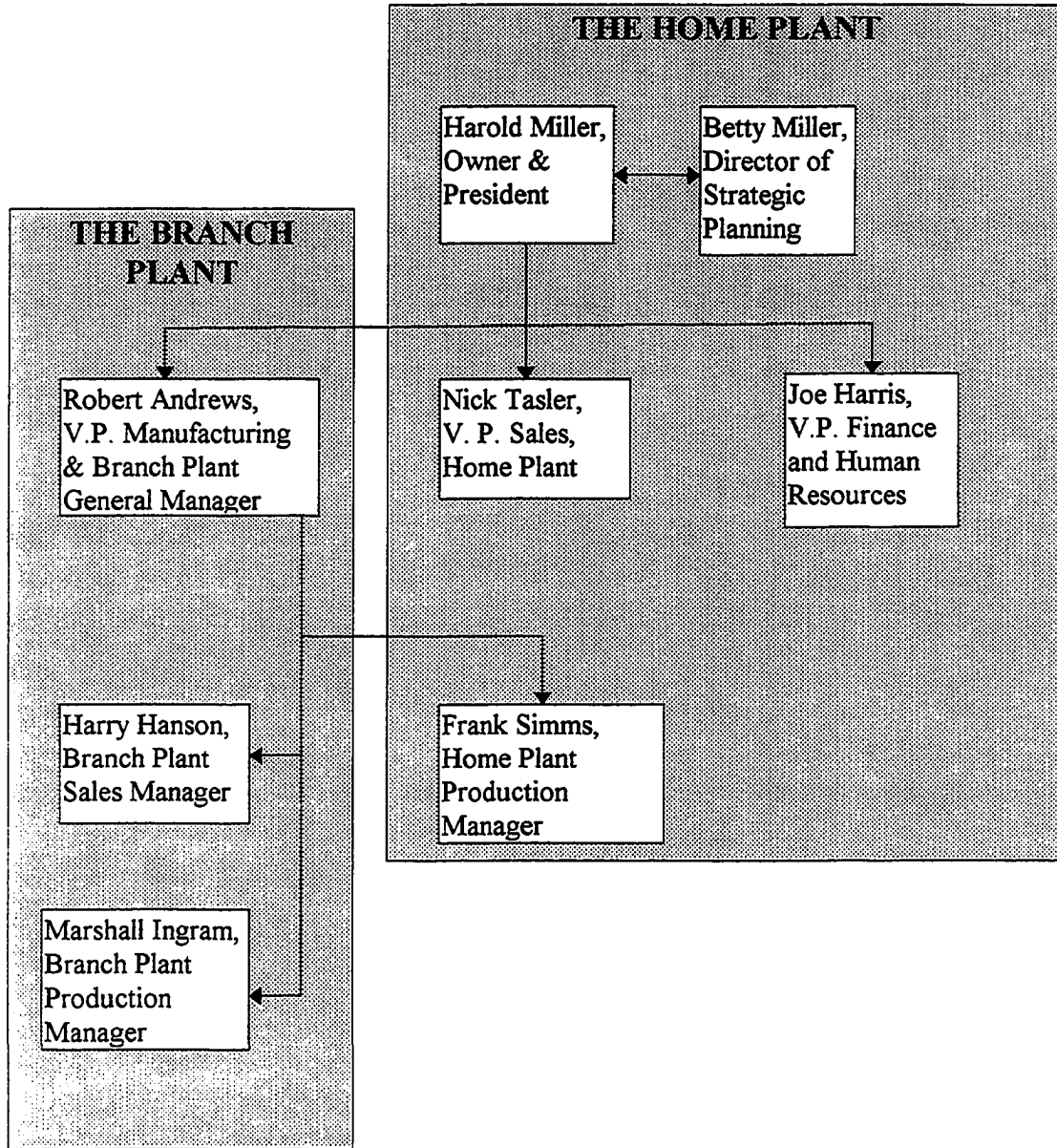


Figure 1. The formal organization

Andrews was responsible for manufacturing in both plants. He was also the general manager for the Branch Plant. In this latter role, he was held accountable for the Branch Plant's profitability. Several individuals reported directly to Andrews, but his primary lieutenants were Harry Hanson, the Branch Plant sales manager, and Marshall Ingram, the Branch Plant production manager. Frank Simms, the Home Plant production manager, reported to Andrews on an administrative basis, but clearly he was impacted by events at the Home Plant on a daily basis.

Tasler had the responsibility for sales and sales service at the Home Plant. In addition to his staff in the Home Plant, he was responsible for three sales people who were located in other cities.

Harris was responsible for both the finance and human resource functions. The general ledger work, including payroll, was all done at the Home Plant. The invoicing and collection activities were segregated by plant. In theory, the human resource function for the company was consolidated in the Home Plant. In actual practice the Branch Plant had a great deal of flexibility in how it operated.

In addition to these three direct reports, Harold relied on his wife Betty to help him think through important issues facing the company. Her title was Director of Strategic Planning, but in practice she was involved in whatever aspects of the company that held an interest for her.

Because he was physically located in the Home Plant, much of Miller's focus was on that plant. In fact, he was virtually unknown to the people in the Branch Plant. Even in the Home Plant, Harold remained isolated from most of the employees.

The informal organization

Kanter and Stein (1979) discuss the tendency of organizational leaders to "create closed inner circles consisting of 'doppelgangers'—people just like the leaders who look like them and tell them only what they want to know" (p. 10). This phenomenon is reflected in the Carter Company's informal organization at the Home Plant. Nick Tasler's political skills

placed him squarely in the "inner circle" with the owners of the Carter Company. Membership in this inner circle made it possible for Tasler's sales group to avoid the scrutiny applied to all other functions during the TQM implementation.

The informal organization at the Branch Plant indicates that Harry Hanson was clearly the dominant figure in that plant. Hanson's influence in the Branch Plant was derived from his powerful personal presence and the fact that he was responsible for the majority of the business booked by the Branch Plant; the Millers did not consider him part of "management." This dominance gave Hanson the freedom to control the plant operations to satisfy his customers' needs, regardless of the impact on other customers or on the Carter Company's overall profitability.

The Carter Company's informal organization is depicted in Figure 2.

The path ahead

The direction was clear. Harold Miller was convinced that TQM was the solution to all of the Carter Company's problems. The main problem, of course, was profitability. Sales had leveled off while costs continued to increase. Miller embraced the idea of TQM even though he did not have any appreciation for the commitment required to make TQM a success. He did understand that TQM was not a quick-fix; he had been told by TQMI that it would be two years before there was any real improvement in financial results.

Chapter Three is about the TQM implementation in the Carter Company. I begin by outlining what is needed to be successful with TQM. I then describe how the Carter Company's management actually performed, and in the final section I provide several implications for other organizations.

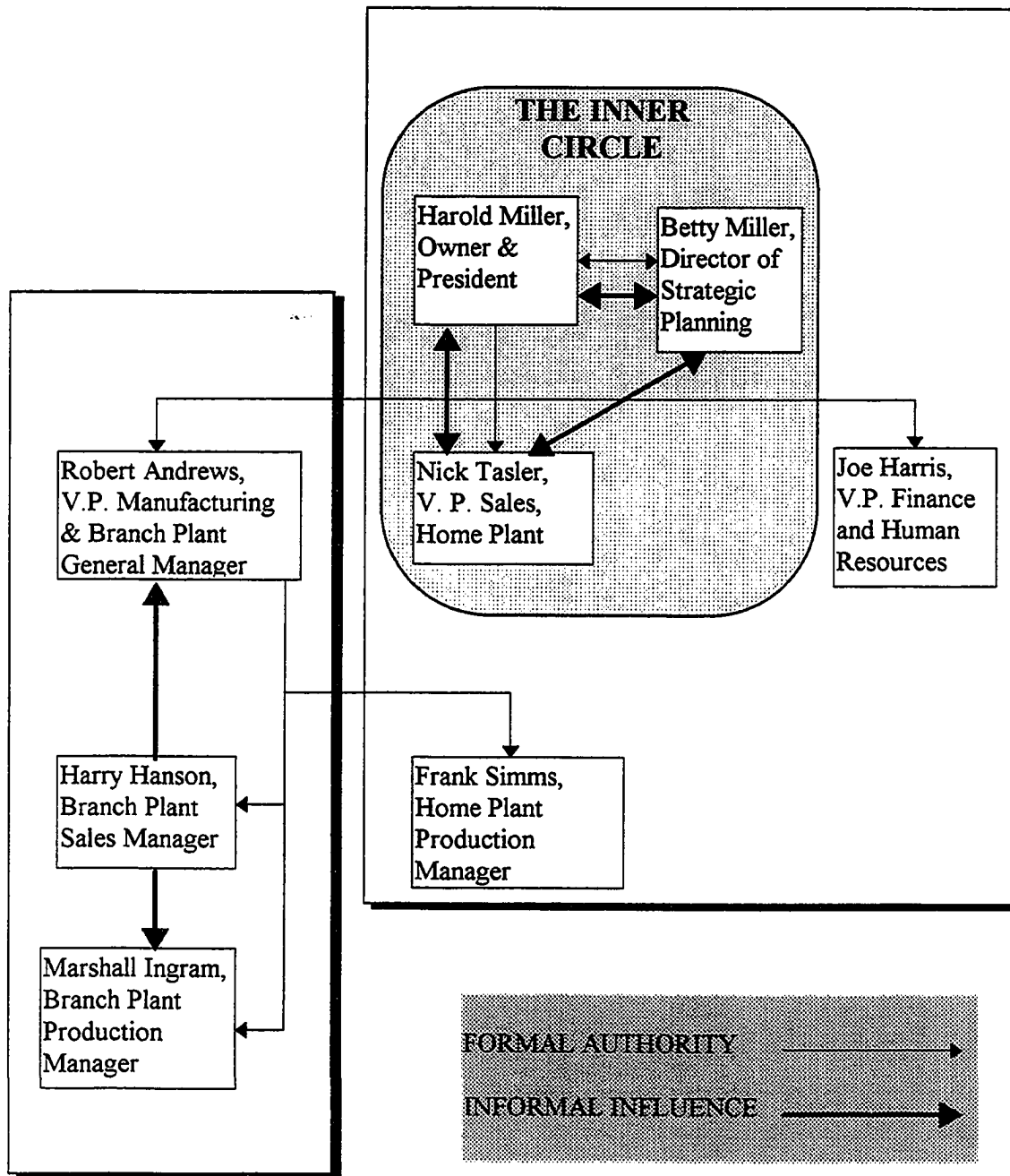


Figure 2. The informal organization

CHAPTER THREE: THE TQM IMPLEMENTATION

I certainly hoped that TQM would let us get things under control better . . . and make my job as president easier.

Harold Miller, owner of the Carter Company

Harold Miller was anxious to get started with the implementation of TQM in the Carter Company. Miller asked the Total Quality Management Institute (TQMI) to begin training people in the Home Plant as soon as possible; there was no time to waste.

This chapter describes how the implementation process unfolded at the Carter Company and discusses the implications for other organizations. In order to place this implementation in the proper perspective, we need to first examine the elements of TQM implementation processes that have been shown to be relevant to success or failure in other organizations. I will also review the specific implementation methodologies recommended by The TQM Institute.

In Chapter One we learned that while companies such as Hewlett-Packard have achieved outstanding results from TQM, the majority of companies have received no benefit. I suggest that the philosophy of TQM is sound, that the difference in outcomes is attributable to the implementation process. In a review of why TQM initiatives fail, Juran (1993) comments that while not many American companies have been successful with TQM, the successful companies "are numerous enough to have proved that world-class quality is attainable in our culture." "From the successful companies . . . we have learned what works," he continues, "from the unsuccessful companies we can see what does not work" (p. 38).

The keys to success; or the seeds of failure

The keys to success are contained in the definition of TQM referenced in Chapter One. The seeds of failure are the degree to which any of these elements is missing in a TQM implementation process. In this section, I will address some of the salient aspects of Total

Quality Management. In subsequent sections, we will see how these apply to the Carter Company's TQM implementation process.

Strategy

Successful practitioners understand that TQM must become an integral part of high-level strategy. Rosabeth Moss Kanter states it this way: "When TQM programs fail, it is because they are mounted as programs, unconnected to business strategy . . . and expected to bring about miraculous transformations" (as quoted in Romano, 1994, p. 23). One of the implications of this strategy issue is the need to establish and communicate a clear vision to clarify the direction in which the organization needs to move. In addressing the reasons why transformation efforts fail, Kotter (1995) states that "in every successful transformation effort that I have seen, the guiding coalition develops a picture of the future that is relatively easy to communicate and appeals to customers, stockholders, and employees" (p. 63).

Leadership

Effective leadership is a critical element in successful TQM implementation initiatives. "TQM . . . requires dedicated and informed leadership from senior management, leadership that is aware of the obstacles to successful implementation" (Roberts & Sergesketter, 1993, p. 2). This need is stated very forcefully by Joseph Juran (1993): "The most decisive element in the success or failure of the quality initiatives of the 1980s is without doubt the extent to which the CEO did not provide personal leadership" (p. 38).

As indicated in the preceding section, senior management must also develop a clear vision for the organization. This must then become a shared vision throughout the organization. "Top management must commit to a vision and align and train its employees toward a common mission" (Capezio & Morehouse, 1993, p. 1).

Leddick (1995) draws an analogy between a leader of an organization and a captain of a passenger ship crossing the North Atlantic. The most important mission of the ship captain is to reach his or her destination safely. One of the captain's primary purposes is identify icebergs so that they can be avoided. In a similar way, leaders of companies must identify

core problems facing the organization. Unfortunately managers can get caught up in activities like optimizing the arrangement of deck chairs or coaxing just a bit more power out of the engines. This can be devastating to TQM transformation efforts.

W. Edwards Deming singled out management style as the critical element in TQM transformations. According to Deming, America's quality problem "has more to do with the American management style than with size or any other factor associated with American organizations" (as quoted in Mawhinney, 1992, p. 525). In a similar vein, Kotter (1995) observes that one of the causes of failures of transformation efforts is that "some very visible senior executives still behave in ways that are antithetical to the vision. The net result is that cynicism among the troops goes up" (p. 63). "Perhaps even more important," Kotter continues, "most of the executives I have known in successful cases of major change learn to 'walk the talk.' They consciously attempt to become a living symbol of the new corporate culture" (p. 64).

Customer satisfaction

In simple terms, the goal of TQM is "to deliver the highest value for the customer at the lowest cost while achieving sustained profit and economic stability for the company" (Capezio & Morehouse, 1993, p. 1). Management consultant Tom Peters contends that many TQM initiatives fail because there is inadequate attention to customers: "Many quality programs are not customer-focused. They are internal programs run by technocrats" (quoted in Romano, 1994, p. 23).

Covey (1990) maintains that all TQM efforts must be customer-focused. The customer is, after all, the ultimate judge of quality. And quality is what the customer determines it to be. "No other stakeholder of a business enterprise—owners, managers, workers, suppliers—can long survive," Covey states, "while ignoring the demands of the [ultimate] judge of quality, the customer" (p. 262-263). Continuing this theme, Kanter (1995) states that "producers worry about visible mistakes. Customers are lost because of invisible

mistakes" (p. 50). In other words, producers focus on their processes; customers want to have their needs met and their dreams fulfilled.

The importance of customer satisfaction is reflected in the criteria for the Malcolm Baldrige Award (Malcolm Baldrige, 1996). Applicants for the award are judged on the basis of seven categories. There are a total of 1000 points available for all of seven categories. The "Customer Satisfaction" category accounts for 300 of the 1000 total points, nearly double the points afforded to any other category.

Employees

Ackoff (1993) contends that employees are the most important stakeholders in quality because "if they are dissatisfied with the quality of their worklives, it doesn't make any difference what kind of quality program is imposed on them. Under such conditions they will not produce a quality product or service" (p. 69). Furthermore, Ackoff contends, "people will respond to appeals for increasing the quality of their outputs only if their self-interest is served by doing so. Emotional or principled appeals will not do it" (p. 78).

Truly empowering employees is essential to the success of a TQM initiative. Empowerment is more than delegation. Empowerment means that "the power to change processes is pushed down to the very lowest level possible on a permanent basis" (Johnson, 1993, p. 190). There are many implications related to empowerment. For example, employees must be trained and equipped to handle this responsibility. Perhaps the most challenging aspect of empowerment is the need to develop high levels of trust throughout the organization.

Teams

One of the most contemporary and comprehensive definitions of TQM (Roberts & Sergesketter, 1993, p. 3) talks about the power of community action. Community action can be fostered by forming groups or teams of individuals to identify the root causes of problems, collect data, propose and test solutions, and recommend implementation. Many organizations have achieved dramatic results through the use of teams. According to the chairman of the

Juran Institute "the large improvements [from TQM] are usually the result of interdepartmental or even cross-functional quality improvement teams. These teams tackle the chronic problems that have been in the way of company progress for a long time" (Godfrey, 1993, p. 48).

Cross functional problem-solving teams are clearly a key element in quality improvement programs. "Without a team approach, it is impossible to work on complex and chronic problems and arrive at permanent solutions" (Gelina, 1993, p. 3-2). Teams develop better solutions than individuals. Groups are also better at generating options and probing relative advantages and disadvantages of given alternatives.

A study by Hall, Mouton, and Blake (1963) sought to determine why groups produced qualitatively superior decisions compared to individuals working alone. The results demonstrated that the grouping of individual judgments improves the chances of success statistically due to the cancellation of individual errors. More importantly, they showed that the addition of interaction further improves the success trend due to the objective evaluation of individual judgments which it fosters. "The decision which results from group interaction may be considered emergent since it represents more than either a simple combination of member contributions or a reflection of best member effort" (p. 155).

Approaches to TQM implementation

The approach taken to TQM implementation is a function of both the TQM expert or consultant and the organization in which the implementation occurs. Regarding the latter point, management theorist Henry Mintzberg has expressed the view that the standardized approaches to TQM taken by some consultants are dangerous for their clients. "A company that thinks . . . 'all we've got to do is plug this in,' is going to do worse than fail," Mintzberg states. "It's just going to make everybody cynical" (as quoted in Fife, 1992, p. 67). Jack West, President of the American Society of Quality Control, makes a similar point: "TQM must be unique to the culture and customers of the organization, and it must respect the company's history and where it wants to go" (as quoted in Romano, 1994, p. 24).

Most of the approaches to TQM implementation in use today are rooted in the work of one of the three most widely recognized gurus: W. Edwards Deming, Joseph Juran, and Philip Crosby. An understanding of the positions taken by each of these individuals will help frame the importance of the implementation process. A brief explanation of the teachings of these three experts follows.

W. Edwards Deming

Deming is clearly the best known quality guru, and has been called the founder of the third wave of the Industrial Revolution. Deming contends that only a fundamental change in the American style of management will solve the quality problem. Deming advocates the implementation of a statistical quality based management approach and considers it critically important that top managers acquire at least a clear appreciation of the usefulness of statistical tools (Logothetis, 1992, p. 13). More specifically, Deming believes that "managers must . . . learn about (a) statistical theories of variation, (b) causal relations among a system of variables . . . (c) scientific methods for isolating cause-effect relationships . . . and (d) psychological variables that relate people to the work processes responsible for quality outputs" (Mawhinney, 1992, p. 526).

Joseph Juran

Juran's Quality Control Handbook (1951) has become the bible of the quality improvement movement. Juran's message is focused on planning and organizational issues. His basic premise is that quality does not happen by accident; it has to be planned. Juran also emphasizes "the importance of creating beneficial change (breakthrough) and of preventing adverse change (control), and management's responsibility for organizing a proper structure for quality attainment" (Logothetis, 1992, p. 62). Juran is less impressed with statistics than Deming and believes that "quality starts with knowing who the customers are and what the customers need" (Capezio & Morehouse, 1993, p. 89).

Deming and Juran agree on the fundamental principles. Deming, however, is more concerned with education, while Juran is more concerned with the actual implementation

process. In general terms, Deming provides the philosophy, Juran provides the specific structure (Logothetis, 1992, p. 77).

Philip Crosby

Author of the bestseller Quality is Free (1979), Crosby was perhaps the first quality professional to hold a senior management position. He served as vice president for quality at ITT under the estimable Harold Geneen. Crosby is best known for his emphasis on "Do it right the first time." He also emphasizes the concept of zero defects. Crosby's advice has been likened to a doctor's prescription, the main ingredients of which are "based on integrity and dedication to customer satisfaction, and on a company-wide system of policies and operations designed to achieve and communicate quality improvements" (Logothetis, 1992, p. 82).

Deming thinks that Crosby's approach is oversimplified. They both agree, however, that "statistical analysis is a very small part of the whole. The emphasis is on people" (Capezio & Morehouse, 1993, p. 103).

The TQM Institute's approach to implementation

The primary underpinning of the TQM Institute (TQMI) is the Deming Management Philosophy. The core of the TQMI implementation methodology is education. The Director of the TQM Institute describes TQMI as an education provider, not a consultancy. Effective training is the foundation on which TQM initiatives are built. Atkinson (1990) states that "the role of training, development and education is probably the most critical aspect of any TQM drive" (p. 185). The TQMI education starts with top management and continues throughout the organization in cross functional, vertically integrated groups. Classes are limited to 15 participants to insure that everyone has an opportunity to gain an understanding of how the Deming philosophy and statistical process control (SPC) applies to their job. The training typically consists of 35 hours over a period of 20 weeks. When an adequate cross section of the organization has been trained, a steering committee is formed followed by the assignment of cross functional quality improvement teams to specific problem areas. The formation and

responsibilities of both steering committees and cross functional quality improvement teams is covered in detail during the training, as is the relationship between the two. TQMI provides facilitation for both the steering committee and the cross functional quality improvement teams. The same TQMI associate does both the training and facilitation to provide continuity to the process.

The steering committee

The steering committee is composed of the top managers in an organization. This group has the responsibility of overseeing the activities of the cross functional quality improvement teams. The steering committee identifies "chronic and complex" problems confronting the organization and assigns them to cross functional quality improvement teams. Team members are selected and appointed by the steering committee. The steering committee also selects and appoints a team leader.

A member of the steering committee serves as the team owner for each cross functional quality improvement team. The team owner's responsibility is to maintain regular contact with the team leader and provide whatever support is required by the team. The team owner is not to participate in the cross functional quality improvement team meetings unless asked to for some specific purpose.

Cross functional quality improvement teams

Cross functional quality improvement teams have 6-10 members and typically meet once a week for a period of six months. During that time they make periodic presentations to the steering committee. These presentations provide an opportunity for the team to update the steering committee on their progress, to ask for clarification, and to ask for resources or assistance. The team leader has the responsibility of organizing and conducting the team meetings. The team members provide knowledge and information and carry out specific activities associated with the team that are assigned by the team leader. The TQMI facilitator provides guidance to the team regarding the problem solving sequence and the use of specific statistical tools.

To maximize the effectiveness of these cross functional quality improvement teams, participants are selected from different functional areas. The widely referenced Team Handbook recommends that team members "represent each area and level of employees affected by the improvement project" (Scholtes, 1988, p. 3-20). Members should also represent a diversity of values and perspectives. "The more diversity you can drive into the make-up of the team, the richer the problem-solving you'll come up with" (Smith, 1991, p. 57). This diversity, however, creates numerous difficulties with the group *process*. "Ninety percent of the difference between a good meeting and a bad meeting has to do with the process, as opposed to the content" (Sisco, 1993, p. 63). The TQMI facilitator assists the team leader in dealing with these team process issues.

Another important element of the TQMI methodology is that the team be composed of peers. The team leader is also a peer of the other members. The reason for stressing this aspect of team membership is to minimize the influence of power and status. One of the status issues is that in a group comprised of members of unequal status, high status members may judge an idea based on its proponent rather than the idea itself (Rao, Srinivasan, & Sirkka, 1991, p. 1356). Furthermore, studies have demonstrated that in task oriented groups, the external status of individual members determines the distribution of participation and influence. This effect occurs even when the external status characteristic is not associated with the task (Berger, Cohen, & Zelditch, 1972). External status characteristics include age, gender, and race. The most prevalent status characteristic in a business environment, however, is an individual's position in the formal organizational hierarchy.

Status can present difficulties even when a group is composed of individuals of having equal external status. Bales (1955) addressed the differentiation of roles in task-oriented groups from the perspective of *initially equal* status members. Observations of experimental groups led Bales to conclude that a status hierarchy develops during a group process. The result of this *differentiation* in status is that higher ranking members in this hierarchy participate more, and have greater influence, than do lower ranking members. The TQMI

methodology specifically addresses this potential difficulty through the use of the multi-voting aspect of the nominal group technique (Delbecq, Van de Ven, & Gustafson, 1975).

The nominal group technique also helps teams avoid the pluralistic ignorance pitfall. Pluralistic ignorance refers to the phenomenon in which virtually all members of a group *privately* reject group norms and values yet believe that virtually all other group members accept them. Miller and McFarland (1987) demonstrated how this phenomenon can cause a group to reach decisions with which a majority of members actually disagree. They also determined that the explanation for this phenomenon is that people believe the fear of embarrassment is influencing their behavior more than it is influencing the behavior of others (p. 301).

Since the use of cross functional quality improvement teams is a key element in the TQMI methodology, team problem solving is a major item in the training. This portion of the training stresses the importance of teams and the organization of teams. A major objective of this team-related training is to insure that everyone in the client organization learns to apply rules and procedures that are essential to the success of teams. One of these "rules" deals with ways to reach decisions that all members can support. This rule emphasizes the multi-voting aspect of the nominal group technique referenced earlier. The trainees also learn that there are four stages of team growth. Tuckman (1965) refers to these as forming, storming, norming, and performing (p. 396). The reason for providing this understanding of the stages of team growth is so that individuals assigned to teams will be aware that frustration in the early phases of team development is a normal phenomenon.

TQMI has developed a model to assist teams in the problem solving process. This model prescribes six sequential steps and specifies tools that are appropriate for each step. Following these steps helps teams avoid two of the "vulnerabilities" identified by Scholtes (1995): "cutting corners without an understanding of what is lost," and "reverting to old-time problem solving methods" (p. 57).

Part of the TQMI training consists of participation in what is referred to as a "practice team." A four week break is provided in the training so that everyone can experience what it

is like to be on a "team." For these practice teams, the members select the leader and the problem that they want to address. The teams meet once a week for four weeks and go through as many steps of solving their chosen problem as possible. At the first training session following the practice team work, the team members present the work they completed to the rest of the class just as they would present to the steering committee for an officially chartered team.

TQM implementation at the Carter Company

We now move to the Carter Company's implementation of TQM. The implementation began soon after the decision to proceed was reached. Did Harold Miller fully appreciate the scope of implementing a comprehensive Total Quality Management system? Keep that question in mind as we accompany the Carter Company on their TQM journey.

The final decision process

After reaching the decision to proceed, Harold Miller contacted Kevin Goodwin, the founder and director of The TQM Institute (TQMI). Goodwin explained that the first step should be to give the Carter Company's key managers an overview of the TQMI process. He emphasized that these managers needed to be convinced of the need for implementing TQM in the Carter Company. Goodwin also stressed that these managers needed to understand the magnitude of the commitment they would be undertaking. Miller and Goodwin agreed to hold this informational session at a client of TQMI who was in a business related to the Carter Company's. This approach afforded the management team the opportunity to talk with a user of the TQMI methodology in addition to hearing about it from the founder of TQMI.

The following managers attended the informational session: Harold Miller, Betty Miller, Nick Tasler, Joe Harris, Robert Andrews, and Marshall Ingram. Frank Simms was not available. Harry Hanson, in spite of his informal control over the Branch Plant, was not present since he was not considered part of the management team.

The Carter Company managers were impressed with what they saw and heard. The client had received major benefits from their work with TQMI. And Goodwin was captivating

and convincing in his presentation of what TQMI had done for other clients. During this informational session, Goodwin again stressed the need for understanding the scope of the undertaking and explained that the TQM effort would fail unless there was a strong management commitment. He also asked that the management team carefully consider the ramifications of the decision and that they arrive at the final decision by secret ballot.

The decision was fait accompli. The only person who expressed any concern about the TQM initiative was Marshall Ingram. "I disagreed with the way we went into it because of the financial situation," Marshall told me. "It just seemed too expensive." I asked Harold Miller how supportive the management group had been about undertaking the TQM initiative. "There was some skepticism," he responded. "I think Nick Tasler was probably the most outspoken in favor of it. I think that others were probably willing to give it a try." Miller's impression was confirmed by Joe Harris. "They [the managers] were indifferent to it," Harris told me. "They gave lip service. But I don't think they really believed in it." Clearly the management group was not completely aligned and committed. On this topic, Kotter (1995) states that "in successful transformations, the chairman or president . . . plus another 5 or 15 or 50 people, come together and develop a shared commitment to excellent performance through renewal" (p. 62).

I was particularly interested in Harold Miller's understanding of the "commitment" required of the Carter Company's management that Goodwin had stressed at the informational session. "I think it meant two things," Miller related. "It meant that we were going to change the way that we operate our business, the way we make decisions, getting input from people . . . [and] it was going to take at least two years to see results."

The objectives and expectations

What was behind the decision to launch a TQM initiative? "I don't know if I could point to any one thing," Miller told me. "It was probably just in reading many different things and seeing what was going on in the industry . . . that people are really making a move in this direction. It was probably driven by competition; our competitors were improving." Marshall

Ingram echoed that sentiment. "Other people [in our industry] were starting to do it [TQM]," Marshall said, "I think that's what got Harold interested in doing it." Joe Harris had a slightly different perspective. "I think Harold was reaching out for a straw trying to find something that works," Harris related. "The trend [in financial results] in the last five years has not been good, and I think he felt like the TQMI program would help." One of the workers at the Branch Plant told me essentially the same thing when I inquired about her understanding about why TQM had been started. "I think they were just grasping at straws," she told me. "It was just a little too late."

And what were the expectations? I posed this question directly to Harold Miller. "I certainly hoped that it would let us get things under control better to eliminate some of the errors and make my job as president easier," Harold responded, "because people would be making their decisions at a lower level in the company." Miller's expectation that TQM might make his job easier indicates just how little he understood about the commitment required on his part. The following statement from the now retired CEO of 3M is a more accurate depiction of what is required to achieve success with TQM: "Implementing a quality improvement process at 3M has been, and continues to be, some of the hardest work the company has undertaken during its 85-year history" (Dingus & Golomski, 1988, p. 11).

The workers in the Carter Company did not seem to have an understanding of why the TQM initiative had been launched. "The only thing I had heard," one of them told me, "is that Harold and Betty had gone somewhere and thought it [TQM] would be something beneficial to our company." Even the managers had difficulty stating a reason. "I don't know what got them going originally," Frank Simms told me. "But it came from upper management." Upper management in the Carter Company refers to Harold and Betty Miller. There is little doubt that the Millers were the driving force behind the decision to proceed. "Harold and I were both interested in it [TQM]," Betty Miller explained. "Harold heard about it through a conference; I came to it through reading and just knowing what was going on in the outside world."

At the beginning of this chapter, I outlined several "keys to success" for TQM transformations. At this juncture it may be helpful to consider the core questions related to each of these keys to success.

Strategy: Is there a clear picture of the future that is relatively easy to communicate and appeals to customers and employees?

Leadership: Has top management made a commitment to a vision? And to align and train employees toward a common mission?

Customer Satisfaction: Is the TQM initiative customer-focused?

Employees: Does the TQM initiative address the quality of worklife of the employees?

Teams: Will the TQM initiative make effective use of teams?

Based on the evidence presented thus far, there is no evidence of a clear vision, no reference to customers, and only a passing reference to employees. The TQMI methodology insures that the Carter Company will utilize teams, and we will examine how effectively they were used in subsequent chapters. We will also be examining the ways in which leadership was exercised during the TQM implementation.

The training

As soon as the final decision to proceed had been taken, Miller called Goodwin to advise him of the decision and to request that the training start as soon as possible. Goodwin assigned Jeffrey Lester to the Carter Company account. Lester is an excellent TQM trainer. He is enthusiastic, energetic, and dedicated to educating people in client organizations. His undergraduate degree is in education, his graduate degree is in statistics, and he has extensive experience in teaching the statistical aspects of TQM. Jeffrey has a good understanding of the "management" side of TQM but little actual experience. He relates well to workers and supervisors but has some difficulty dealing with senior management.

Lester plunged right into training. He did not have an opportunity to learn anything about the Carter Company or meet any of the people. The first class was conducted at the Home Plant. Both Harold and Betty Miller attended the sessions and demonstrated a strong

commitment. "Betty and Harold seemed so committed to it [TQM] and they were coming to the training sessions just like everybody else," one worker told me. "And . . . it was evident that they were willing to spend time and money to do it [TQM]." "But," the worker continued, "I really question spending time and money on things like this when you say you can't get your bills paid."

Jeffrey Lester told me that he never doubted Betty Miller's commitment to the TQM process. He was not so certain about Harold's level of personal commitment to TQM. "While he spoke to people about commitment and change," Lester told me, "he did not ever show any enthusiasm." "In fact," Lester continued, "it almost seemed to be painful for him to talk about TQM, even when he conducted a training class graduation ceremony." Lester also told me that Miller was never willing to talk about ways in which he personally could use TQM concepts and tools.

One of the ways that Miller demonstrated his commitment to the process was by his unwavering position regarding participation in the training. There was no excuse for not attending every session. Some of the workers questioned this unrelenting position. Most of their concern was in regard to customer service. "I couldn't get rid of the feeling that if we had as much commitment to the customer as we did to attend the classes that things would get better," one worker told me. "I didn't feel the customer was being served the best at that time [during the time that training was being conducted]," another said. One of the sales people related a specific incident: "I remember one time when our truck driver was in here going through training and people [customers] were calling. They wanted their jobs. And the material was setting out there in boxes with no way to get it to them because the guy [trucker] is in TQM training. It's hard to explain why he can't get it to them."

Marshall Ingram also expressed concern about customer service. "I heard complaints in the training meetings about 'I really need to be doing something else instead of this [attending class] because I have a customer that needs one thing or another,'" Marshall related. "I can understand the customer being irritated." But Marshall was primarily concerned about the impact on results. "We're in some financial bind right now," he

explained. "And I think part of the reason is because of these classes You're taking somebody out of production during the day . . . so they can go to these meetings But the work has to be done, so now you're paying time and a half to get the work done It's very expensive."

A working lead person also voiced concern about being out of the work place to attend training. "While I was in here for meetings," she explained, "there were temporary people . . . that were out there screwing up while I could have been out there watching them."

Harold Miller was aware of the workers' perception concerning his rigid position about attending the training session. His position, rightly so, was that the managers, supervisors, and workers knew when the training sessions were scheduled and that they needed to do a better job of planning in order to meet important customer requirements. The training sessions were three hours long and were held one day a week. No more than 15 people were involved at one time. Jeffrey Lester's opinion was that most of the managers and supervisors made no effort to plan around the training sessions. They had no commitment to the TQM initiative. And, as Lester told me, "they never practiced TQM; they were set in their ways, and they were closed about their areas of responsibility."

There were definitely some positive aspects to the training. As we will see in the "results" section of this chapter, the training helped everyone to understand how TQM concepts and principles could be applied. Participants' comments about the practice team exercise, an integral part of the training, were particularly interesting. "Our practice team was fantastic," Frank Simms related. "And that is generally what I have been getting from most people that are on practice teams. They just think they are great because we get people from different departments and we're looking at different things It is a real eye opener." One of the workers told me about a "conversion" that occurred as a result of an individual's experience on a practice team. "I saw one guy get completely swayed, completely changed his mind on it [TQM]," he told me. The most interesting testimonial about practice teams came from a long term employee who initially told me about her lack of enthusiasm about TQM. "I am not real gung ho on TQM," she told me. But when we started talking about the

practice team experience, her eyes lit up. "I liked that," she related. "I got to be secretary and type up all the stuff and make all the charts and do all that good stuff. We had a good team. It was fun." Interestingly, one of the practice teams achieved greater tangible results in their four week self-directed activities than did any of the teams commissioned by the steering committee.

The steering committee

The steering committee was formed about a year into the TQM implementation. The members were Harold Miller, Betty Miller, Nick Tasler, Joe Harris, Robert Andrews, Frank Simms, and Marshall Ingram. Kevin Goodwin conducted an orientation session for the group. The steering committee members were reminded of the team process tools they had learned during the TQM training. Goodwin then explained the ways in which the steering committee might identify problems to assign to cross functional problem solving teams. He stressed the need to address meaningful problems that would have major impact on the organization.

Goodwin also emphasized the need to focus on a small number of problems and not allow the TQM effort to become diluted through a proliferation of teams. For the Carter Company, he recommended that they limit the number of teams to three; two for the Home Plant and one for the Branch Plant. He explained that teams require the expenditure of both time and resources, and that the organization simply could not support more than three teams.

In the month following this training, the steering committee identified a problem at each of the plants and assigned these problems to teams. In Chapter Four we will address the Home Plant's Good Waste team in depth: the problem, the team members' experiences, and the results. Chapter Five will be a similar examination of the Branch Plant's Job Ticket team.

The cross functional quality improvement teams

The two cross functional quality improvement teams referenced earlier were the primary focus of this study. The Carter Company's cross functional quality improvement teams had most of the attributes envisioned by the TQMI methodology. The members represented a diversity of departments, the team leaders were effective, and Jeffrey Lester

served as facilitator for the teams. The one way in which the Carter Company's approach differed from TQMI's recommendation was in regard to the involvement by the team owner. The Carter Company's team owners attended all of the team meetings, and not infrequently interjected their own opinions during the team meetings. Jeffrey Lester told me that he had strongly advised against team owner attendance at the team meetings at an early steering committee meeting. Nick Tasler, however, was adamant about the need for team owner attendance and the other members of the steering committee went along with his recommendation.

It is also worth noting at this point that some of the team members had the same concerns about attending team meetings that were expressed about the training sessions. "When it would come time for one of the meetings, it didn't make any difference what you were doing, you dropped what you were doing and went to the meeting," one team member told me. "And maybe you're working on a rush job for a customer. It didn't make any difference, you had to go to that meeting. And I had a hard time with that." Another team member related similar sentiments: "A lot of times I wondered about the concept of taking the production people away from production when there was a job a client was waiting for and we would have to stop to go to a meeting. That kind of bothered me."

Those were the perceptions of the workers. In reality, the team meetings were only one hour long, the teams only met once per week, and there were never more than two "steering committee chartered" teams in either plant.

On a positive note, workers who had not been on teams noticed a positive change in the attitudes of their coworkers who had been on teams:

"I think that people that are on a team felt like they were more involved in the management decisions in some fashion. I think that makes them feel more like they are a part of the company."

"I think that it's changing a lot of attitudes once they are on a team, that they are understanding a little more as to the other departments."

"Once people who were negative about TQM were on a team, I didn't hear as much of that [criticism of TQM]. I'd say a lot of attitudes changed for the better."

One of the negative perceptions about teams was that the TQMI methodology was unnecessarily structured, which caused the teams to expend more time than might otherwise be required. Speaking to the "structure" of the TQMI problem solving methodology, Frank Simms made the following observation: "Even if it was a no-brainer and the team could figure something out right away, they weren't allowed to do that." A team member made a similar comment. "It's almost like the structure of everything is more important than the focus of why you're doing it," he related. "You get bogged down in the tools and the terminology." Another team member told me that "if there was a way that it could be done in a shorter span of time I think it would improve the process." Harry Hanson stated his opinion of teams very diplomatically: "They seem to devote a lot of time and energy working out some of these problems."

The "task force" teams

Nick Tasler was impatient with the pace of the TQM transformation. He felt that the formal cross functional quality improvement teams were too structured and too slow. "The steps they go through are far more labor intensive and far more time consuming than they need to be," he told me. "Teams can be so concerned about the process . . . that you can lose sight of the fact that you have a decision to make." Ultimately Tasler took matters into his own hands. In spite of Kevin Goodwin's admonitions about diluting the TQM effort, Tasler chartered several teams that he referred to as "task force" groups that were directed to work on problems that he felt were important. These groups did not have the diversity of the formally chartered cross functional quality improvement teams, nor did they have a facilitator. After he learned of these teams, Jeffrey Lester observed a few of meetings. "It was chaos," he told me. "There was no leadership and they were not focused. They were just setting around placing blame."

The results of this proliferation of teams was predictable. "It was recommended to us strongly by TQMI that we have two or three projects and that we focus on them very intently," Joe Harris recalled. "But, at one time, we had probably ten or twelve 'task forces' and I think that just choked us; they just inundated us with too much, too many team meetings and it affected our production and operations."

Promotion and recognition

The company newsletter was used to promote the TQM program. Articles reinforcing TQM concepts and tools were a regular feature. The newsletter also recognized the "TQM" contributions of both teams and individuals on a regular basis. Harold and Betty Miller also provided individual recognition to employees who they perceived were using or promoting the TQM concepts and tools. In response to my question about what he had learned about the Carter Company employees as a result of the TQM initiative, Harold responded: "There are a lot of employees that might go totally unnoticed except for the fact that they kind of shined [in their TQM roles]. It was unfortunate that some of the others had attitudes that they just weren't going to change."

During my investigation I learned who some of the people were who "kind of shined" in Harold's opinion. One of these was a young man named Paul Schmidt. I got a different perspective on Paul from Frank Simms. "Paul Schmidt was really into this [TQM]," Simms told me. "He spent so much time running around the shop promoting TQM . . . and collecting data on things that he'd initiate on his own, that he'd run entire jobs that were junk. . . . And you sure couldn't say anything about it because everybody [in senior management] thought it was great." I asked Jeffrey Lester about Simms comments concerning Paul Schmidt. His response was that Schmidt did attempt to make improvements by using the TQM tools. Unfortunately, Simms did not have much respect for Schmidt nor did Simms really support TQM.

Support from the TOM Institute

Jeffrey Lester provided virtually all of TQMI's ongoing support for the Carter Company's TQM implementation. Lester conducted training for all the employees, facilitated the team meetings, and spent time with people on an individual basis to help make the TQM initiative a success. Lester was frustrated at his inability to influence Harold Miller. Miller considered Lester to be a good trainer and facilitator but did not respect his business acumen. "Whenever I approached Harold about the need to work on the 'sacred cows' [sales issues and overall business indicators], he had his reasons why it wasn't necessary," Lester told me. Nick Tasler was even more difficult, wanting Lester to work everywhere but in Tasler's area of responsibility. Lester also told me that, with the exception of two of the supervisors, none of the manager-supervisor group ever made any attempt to manage using the TQM concepts and tools.

Even though they were not well acquainted, Miller did seem to hold Kevin Goodwin in high regard. In mid 1994, Miller requested that Goodwin visit both of the plants to "motivate" the managers. These half day sessions consisted primarily of a review of the TQMI methods and philosophies. In the latter part of 1994, Miller requested that Goodwin conduct a full day seminar for all of the Carter Company's managers and supervisors. The primary thrust of this meeting was to provide an overall review, then generate ideas as to how this group could become "coaches" rather than manage in the traditional manner. Unfortunately this session was not well received by many of the attendees. In the weeks following this meeting, Jeffrey Lester heard comments such as: "We lost a day's work." "Goodwin doesn't understand our business."

Miller made one further attempt to involve Goodwin in the Carter Company's TQM implementation. In early 1995, Miller asked Lester to schedule a time for Goodwin to meet with the Carter Company's managers. Goodwin told Lester that it was pointless for him to meet with the Carter Company management team unless they first provided TQMI with some specific information about sales revenue and labor costs. Lester had repeatedly asked Miller for this information but had always been told that it wasn't available, that the Carter Company

management knew how the business was doing and that they did not need the kind of data requested by TQMI.

This time, however, Miller asked Joe Harris to develop the information and provided it to Lester. Goodwin and Lester reviewed the data, constructed some trend charts, and summarized the implications. Due to scheduling difficulties Goodwin was unable to make a trip to the Home Plant on a timely basis so the TQMI analysis was transmitted to the Carter Company management by Jeffrey Lester. The Carter Company management team dismissed the TQMI observations as superficial and uninformed. That was the last involvement Kevin Goodwin had with the Carter Company.

The results

Not many tangible results could be attributed to the Carter Company's TQM initiative. When I asked Harold Miller what benefit the Carter Company had received from the TQM initiative, he responded: "I certainly couldn't quantify it. I could talk about people's attitudes, cooperation between departments being improved. . . . But if somebody said, 'hang a dollar sign on them,' I wouldn't even know where to start." Several participants commented on the absence of tangible benefits; others commented on the intangible aspects of the TQM program. Jeffrey Lester's response to my question about the lack of results was that the basic problem was lack of support and leadership on the part of the Carter Company's managers and supervisors.

Tangible results

One of the problems regarding the quantification of the results from the TQM initiative is that the Carter Company did not have, nor did they ever develop, appropriate measurement systems. When I asked Joe Harris what kind of measures the Carter Company had for scrap and rework, he responded: "We recorded it [but] we had virtually no way of capturing that recording to evaluate it. I know from the size of half a dozen jobs that went bad that our error work went up considerably [after TQM was started], but I think that's a coincidence."

Other participants also expressed the opinion that scrap and rework had actually increased after the TQM initiative had been launched, but like Harris they had no solid evidence.

I asked several of the participants the direct question, "Did TQM provide any measurable benefit to the Carter Company?" Frank Simms' response was brief and to the point: "Not really, no!" As we have seen, however, Simms did nothing to bring about any improvement. Several of the worker participants echoed Simms' sentiment:

"TQM did not accomplish anything. There were no changes made in any of the processes in our shop."

"There's no real physical evidence of any improvement that we can see. In fact, there's a lot of evidence of it going in the other direction."

"I've been here nine years and the quality gets worse now."

"I don't know how much they paid to have all the training [by TQMI] but what good did it do?"

Marshall Ingram was certain of one thing. The TQM program had caused the Carter Company to lose money. He told me that when senior management had asked him about the Branch Plant's financial results he had responded: "Now wait a minute. You're quoting a job to a customer at your regular price. And you're taking people out of production work . . . to go to a meeting [training]. So we're paying people time and a half to do that production . . . but you're only charging straight time for it. Plus you're spending money for the training."

Intangible results

Most of the comments from workers about intangible results were positive.

"I think it [TQM] has helped us work together."

"I think it [TQM] has helped communication a lot. I was always afraid to go to customer service and ask them a question. [Now] I feel comfortable."

"It [TQM] has made communications so much better."

"The work environment is better because people are talking more."

Similarly most of the comments from supervisors were positive.

"We have people working from department to department talking to each other that have never even said 'hi' in the morning, let alone talk to each other about anything."

"We've gotten more team oriented. . . . It's gotten better because of TQM."

"Before TQM nobody saw the big picture. Each little department had its own paradigm and that's all they knew about and that's all they cared about."

But the TQM initiative also had a negative impact on morale. One aspect of the morale problem was related to the disappointment some people felt when they did not see any change on the part of management. "TQM had some . . . negative effect on morale," a supervisor told me. "[Initially] people were griping about the classes. Then you had the expectation level, 'Oh, things are going to change,' and then they didn't change." The other aspect of the morale issue was related to the fact that less than a year after the TQM initiative was undertaken the Carter Company management was forced to take drastic actions to reduce costs. Several of the participants spoke of "resentment" about the money that was spent on the TQM effort. "They [management] have cut benefits. . . . People have been laid off. . . . It will soon be two years since I've had any kind of a [pay] increase," one worker told me. "If they have money to spend on TQM then why are these other things happening. We feel like this [TQM] is an unnecessary expense. If you can't pay the bills then you don't need to be spending money hiring outside consultants."

The dissatisfaction with lack of change may have been exacerbated by unrealistically high expectation levels. The TQMI training emphasizes that, in TQM companies, managers become coaches, that they seek input from all parts of the organization, that they make decisions on the basis of data, and so on. Clearly, the Carter Company management did not behave in accord with these principles. The training also illustrates the negative implications of employee rating systems and suggests that TQM companies do not utilize performance appraisals. One of the supervisors commented to me that, to him, the fact that the Carter Company continued to evaluate employees demonstrated that the management was not committed to change. In reality, the vast majority of companies that have successfully implemented TQM continue to use performance appraisals.

The situation referenced above was exacerbated by the fact that management began these cost reduction measures after launching the TQM effort. When the TQM initiative began, only the Millers and Joe Harris knew that the Carter Company was in financial difficulty. The Millers had hoped that things would get better and that TQM would help. When it became obvious that cost reductions were necessary in order for the Carter Company to remain viable, the Millers had the option of terminating or delaying the TQM initiative. They did not seriously consider that option since they viewed TQM as the only possible way to make the company successful in the long term.

The reasons for the Carter Company's poor results

One of the major reasons for the type of results outlined in the preceding section was the absence of effective leadership in the Carter Company. The irony is that while Harold Miller was almost fanatical in his commitment to some aspects of the TQM program, he and other managers did not apply TQM principles and concepts to their jobs; they did not walk-the-talk. "We [management] promoted these programs but we didn't put them into practice," Joe Harris observed. "It [TQM] has to start at the top. We preached it but we didn't practice it." Harold Miller acknowledged the difficulty the Carter Company management had in adopting a new management style. "In the heat of battle people tend to revert to old ways," Miller commented, "just telling people what to do and how to do it, probably myself included."

Additional perspective on the issue of leadership will be provided in Chapters Four and Five where we will examine the influence of management actions on the two cross functional quality improvement teams.

The condition of the business when the TQM initiative was launched also made it difficult to achieve positive results. "Maybe if we had started a year earlier," Harold Miller reflected, "it might have been early enough to make a difference." Betty Miller made a similar observation: "I wish we had started [TQM] earlier because I think that it's working." Joe

Harris was even more to the point. "TQMI came in too late," Joe related. "The damage for Carter's was too severe. We couldn't recover."

The most serious failing of the Carter Company's TQM implementation was that the management did not address the company's most serious issue: sales. The areas chosen for attention were all related to production, not sales. "But [regarding] the bigger problems [sales] . . . we were just bleeding to death," Joe Harris lamented. "We never addressed the sales issues; the success or failure of a sales call, the methods of our sales calls, the method of our pricing." Nick Tasler was always able to deflect attention away from his area of responsibility.

Implications for other organizations

The implications of the Carter Company's TQM implementation will become more apparent in subsequent chapters. For the moment we can identify several aspects of the Carter Company's approach that are at variance with the five previously identified generic "keys to success" in TQM transformation efforts. The Carter Company implementation also deviated from some of the specific methodologies recommended by TQMI. Finally there are some issues unique to the context of this study that are worthy of note at this point.

The generic keys to success: or the seeds of failure

When one or more of the five generic keys to successful TQM implementation is missing, the seeds of failure are planted. How did the Carter Company's TQM implementation address these items?

Strategy: No one in the Carter Company seemed to have a clear picture of the future. The objectives of the TQM effort were not clear, nor were they effectively communicated.

Leadership: Top management did not understand the nature of the commitment required to be successful. There was no "vision" of the future. Furthermore there was no recognizable change in management's style.



Customer satisfaction: The Carter Company was certainly not customer-focused. In fact, no one in management ever referred to customers. Interestingly several of the workers in the company did express concern about customers.

Employees: The Carter Company's TQM implementation did not improve the quality of worklife for the employees. Worse yet, the TQM training raised the expectation level of employees. When nothing changed they were disenchanted.

Teams: The Carter Company implementation made use of teams. We will examine this aspect of the TQM implementation in Chapters Four and Five.

Issues related to the TQM implementation methodologies

In this section, I will comment on two aspects of the TQM implementation methodologies, (1) the TQMI methodologies themselves, and (2) the manner in which the Carter Company implemented the TQMI methodologies.

The TQMI methodologies

The core of the TQMI implementation is education in the Deming Management Philosophy and in statistical and problem solving tools. Education is a necessary, but not sufficient, condition to achieve an organizational transformation. The transformation of an organization must begin with the leaders; they must establish direction for the organization and lead the transformation effort by example. The implication is that, in addition to "education," the organization's leaders need to be coached and challenged throughout the implementation process.

As we have seen, the content of the TQMI training is also an issue. The TQM training in the Carter Company created unrealistic expectation levels in the minds of many of the employees about how the organization might change as a result of the TQM implementation. To be fair, there is always some selective listening; employees are much more open to how management might change than how they personally need to change. In any event, the implication is that training needs to be adapted to meet the needs of the individual organization. In other words, trainers should understand what management actually plans to

implement, and then tailor the training so as to minimize subsequent disappointment and disillusionment. Furthermore, trainers should emphasize the responsibility of the individual in bringing about change in the organization.

Finally, the TQMI implementation was not customized for the Carter Company. As Dingus and Golomski (1988) point out, "a quality process must be adapted to, not adopted by, an organization" (p. 12). In other words, TQM is not an off-the-shelf item, it cannot ignore existing norms, values, systems and operating procedures.

The application of the TQMI methodologies in the Carter Company

Two of the TQMI implementation methodologies regarding cross functional quality improvement teams were violated by the Carter Company. First of all, the team owners attended all of the meetings of the cross functional quality improvement teams. I will comment on the effect that had on the teams in Chapters Four and Five. Secondly, TQMI's admonition to limit the number of teams was ignored. As a result, the Carter Company was inundated by the proliferation of teams.

Another issue related to the selection of "problems" to address. As we will see in later chapters, the Carter Company management chose to focus on manufacturing processes rather than address the major issues confronting the company. Finally, the Carter Company management seemed to almost purposefully avoid establishing meaningful measures of business performance.

Issues unique to the context of this setting

The first issue that is unique to the context of this setting relates to the reality that the Carter Company was in trouble when the TQM effort was launched and that the condition of the company steadily deteriorated from that point. While this is not truly unique, it is not a condition that is typically addressed when analyzing the results of TQM implementation efforts. As I noted earlier, the Carter Company management implemented major cost reduction measures that directly impacted employees less than a year into the TQM initiative. The fact that the company took these actions while continuing to spend money with TQMI

created resentment on the part of the employees. If the employees had been advised of the financial condition of the company before the TQM initiative was launched, and if management had been able to articulate a vision for the company, management might have been able to convince the employees of the rationale for continuing the TQM implementation. But by the time the dramatic cost reductions became necessary, it was too late for management to build the required credibility with employees. The other option for management was to terminate, or at least delay, the TQM implementation. This option was ruled out because at that point TQM was viewed as the only possibility of long term success.

The second issue that is unique to the context of this setting relates to the fact that the Carter Company's TQM implementation did not address the deterioration in the company's market position. Management chose to fine tune production processes rather than tackle the company's core problem. Unfortunately this is an all too common occurrence in TQM transformation initiatives; it is easier to "rearrange the deck chairs" than to find icebergs and navigate around them.

CHAPTER FOUR: THE GOOD WASTE TEAM

I looked forward to the team;

I thought I could do something to help.

Team member

The Good Waste team was the first TQM team chartered by the Carter Company. Expectations were high, and there was an aura of excitement. "I was excited about it," one team member told me. "I looked at it as an opportunity to learn." The team members were also proud to have been selected. "I felt real happy and I think even a little proud," another related. "I'm on the first team and we have a problem, and we're going to work on it, and we're going to help the company out."

The problem of good waste

The problem assigned to the team actually resulted from Harold Miller hearing about a job on which there was an unusually large amount of material left over after filling a customer's order. "Good waste" was a term coined by the Carter Company to describe mismatched quantities of parts. During the manufacturing process, parts were produced in different departments then brought together in final assembly. Because the Carter Company produced custom designed items to specific customer orders, mismatches in the quantities of parts resulted in scrap even though the parts were "good."

Harold Miller suggested this issue to the steering committee as a potential problem to assign to the first team. "Good waste was definitely a pet peeve of Harold's," Jeffrey Lester told me. Not surprisingly, the other members of the steering committee agreed that this would be a good topic to assign the company's first team. I asked Miller if this problem was selected using the multi-voting technique recommended by TQMI. "Yes," he responded, "I probably should confess though that I felt that good waste was definitely a problem."

The team members

The team members represented a cross section of the Home Plant's production and administrative functional areas. There was, however, no representation from the sales department. Let me introduce you to the members of the team.

Randy Shepard, the team leader, had been with Carter for 14 years. An assembler, Randy was an enthusiastic, high energy person in his late thirties. During my interview with Randy, I remember thinking that he could make a living as a stand up comic. His sense of humor, his wit, and his repertoire of anecdotes made it hard to keep focused on the interview. Clearly Randy enjoyed being in the limelight as the leader of the team. And, he had obviously approached that role with great enthusiasm and anticipation.

George Kessler, an assembler, had been with Carter for 28 years. A reserved, yet warm and friendly, man in his mid fifties. To George, the Carter Company was like family. He had developed many friendships over the years and expected to spend the rest of his working life at Carter. He couldn't imagine working anywhere else, and he showed real emotion when talking about the company.

Bonnie Olson, an estimator in her mid forties, had 15 years of service with Carter. Bonnie was willing to freely share her views on any number of topics. Like George, she looked at Carter as the place she would work as long as she was able. She too spoke with emotion and feeling about the company, particularly when discussing the current management.

Peggy Lynch, a woman in her early forties, started with the Carter Company as a temporary. Her talents were soon recognized and six years before she was named administrative assistant to Harold Miller. Peggy has a radiant personality and is always positive.

Earl Jensen, was a 16 year veteran at the Carter Company, was in his mid forties. He was very friendly but his comments appeared to be carefully guarded. During our interview, he was careful to provide politically correct responses, never quite revealing his personal feelings. Earl was the buyer for the Home Plant and had previously been in sales.

Edward Bowles, a third shift welder in his forties, had been with the Carter Company for 11 years. On the rare occasion when Edward spoke out, his comments were always insightful. Edward is perceptive, and a realist; at the time of our interview, he already had a part time day job at another company so that he would be positioned to work there on a full time basis just in case conditions at the Carter Company got worse.

Fred Perkins was the company controller. A man in his late twenties, Perkins had been with the Carter Company for just over two years and had already obtained a job with another company when my study began.

With the exception of Perkins, this was a loyal group of employees who were dedicated to the success of the Carter Company. They made comments such as:

"I want to do what I can to keep the company going as best as possible. And that's why I looked forward to the team; I thought I could do something to help."

"I have pretty much devoted myself to this company and have decided I'm going to do anything and everything I can to help the company because it's going to help me."

"I looked at it as a wonderful opportunity to get some problems taken care of in the company."

The team members were also interested in learning more about TQM. "I knew it would be an opportunity to learn more about TQM," George told me. "That's one of the reasons why I looked forward to it."

The experiences of team members (the view from inside)

In order to fully appreciate the experiences of the team members, we need to examine three different aspects of the team's activities: The actual team meetings, garnering outside support, and the meetings held with the steering committee.

The team meetings

The team members reported that a spirit of cooperation was prevalent. "We were a cooperative bunch," as Fred Perkins described it. George Kessler commented that, "everybody seemed to be cooperative, and it really worked well as a team." There was also

good participation. The team leader was complimentary of all the members: "I can't think of anybody on that team that didn't really try hard." Others commented about how willing members were to do what they were asked to do and about how conscientious everyone was.

Randy, the team leader, received high marks from most of the team members: "Randy is very outgoing." "He treated everybody fairly." "He listened to everybody and asked everyone to participate." "I thought he did a good job." In fact, Randy was so popular with the team that they referred to their team as *Randy's Kids*. Peggy Lynch agreed that Shepard's outgoing manner was an important element in maintaining a cooperative atmosphere, "But," she told me, "he could have focused more and been able to be a little more organized." That fits with what Fred Perkins told me about his recollection of the team meetings: "We struggled for direction, we struggled to keep our focus during the team meetings."

The TQMI model for problem solving teams envisions a team solely of peers. The model also stipulates that the team sponsor, always a member of the management steering committee, only attend team meetings when requested by the team. The Good Waste team differed from the model in two ways. First, Fred Perkins, the company controller, was clearly not on a peer relationship with the other team members. Furthermore, since Peggy Lynch was the administrative assistant to Harold Miller, her presence could have been threatening to some of the team members. I did not, however, pick up any indication that either of these individuals caused any type of problem with the functioning of the team. The other dimension on which the Good Waste team differed from the TQMI model is that Frank Simms, the team sponsor, attended all of the meetings. Jeffrey Lester was never able to convince the Carter Company management that they should let the teams operate without management being present. The rationale used by the Carter Company's management to justify this approach was that, by attending the team meetings, the sponsor was able to provide assistance whenever it was needed. Earl Jensen did not buy in to that argument. "Our management group doesn't have any faith in people," he told me. The team leader said simply that, "Frank felt he had to be there." The other team members felt that Simms' presence limited discussion. "Members might have been more open to talk if Frank had not been there," Fred offered. Similarly,

Peggy Lynch commented that on some occasions "Frank would get control over the meeting, and his comments would sway the team members' thought process too much." And Bonnie Olson observed that, "because Frank is responsible for the whole plant, he got very defensive whenever you'd say anything about something going on in the plant."

And finally, the team members recalled that they had functioned as a team for nearly a year. Toward the end, it seemed to them to be an interminably long time. Peggy Lynch summed it up, "It got to the point where everyone was burned out. They wanted to get off [the project], get it over with. It got to be, 'I have to go to this meeting, and we're not getting anywhere.'"

Getting support

Cross functional problem solving teams rely heavily on support from other parts of the organization. The team needs to have accurate and timely data collected regarding the process they are studying; they need resources; and they need time to prepare for the team meetings. If team members do not receive support, the assignment can become a very frustrating experience.

The team was pleased with the support they received from their direct supervisors. "I never had a problem," George Kessler commented, "and, I not only had to go to team meetings, but I had to spend time creating charts. . . . My boss was very supportive of anything that I asked to be able to do." Speaking to the overall issue of the Carter TQM initiative, Edward Bowles observed that, "all of the supervisors were for it. . . . Everybody was very supportive of it. Everybody wanted it to work."

The team members were less complimentary of their peers who were not members of the Good Waste team. In both the group interview and individual interviews, I was told:

"I just don't think we had the cooperation. . . . It just seemed to me like we would go out and try and get data collected and we wouldn't have any cooperation. . . . That was very discouraging."

"I got so frustrated asking for help from other people that I finally gave up and just decided I was going to have to do it myself."

"The cooperation I got out of my department was almost nil."

"I had a terrible time getting cooperation from other departments to help out me out on that."

Several of the team members felt that one of the reasons for lack of support was that some of their peers had not been through the TQM training. "Because without having gone through the training there were some problems understanding what it was all about and why we were doing it," George Kessler observed. "And if somebody doesn't understand why you are asking them to do something extra, they might not be quite as willing to do it." But a more significant issue may have been related to the fact that some of their peers did not support the TQM initiative. "We've got some people with negative thoughts about TQM," Randy Shepard related to me, "and when they know you're on a team, they'll make smart remarks like, 'Well this TQM thing is really a joke.' That goes on all the time."

Meetings with the steering committee

When I interviewed the Good Waste team members, six months had passed since the team had met with the steering committee; yet they seemed to recall their experience with the steering committee as if it was yesterday. It was not a happy recollection!

First of all, the team was assigned a non-issue; Good Waste was not a problem. The steering committee had a hard time accepting that conclusion and kept the team collecting data for nearly a year. To compound the frustration, the steering committee gave the team a solution to this nonexistent problem early in the process. And in the end, they did not ever give the team a sense of closure.

At the beginning of my group interview with Edward Bowles, George Kessler, and Bonnie Olson, I first asked them to introduce themselves. Then I asked them to comment on their experiences while serving on the Good Waste team. The opening salvo was from Bonnie: "All of us were extremely disappointed because management had come in and

recommended a solution to our problem, and we hadn't even brainstormed about what we thought the problem was and they came in and said we think you ought to . . ." George chimed in, "This was the guidance team . . . the people we work for, and we have to listen to these people." The team had been told in the TQM training that teams were to be *empowered* to analyze problems and recommend solutions. When the Good Waste team members were assigned to the team, they were excited about helping the company improve. The first time they met with the steering committee, however, they realized that conditions were not quite like they expected. As Peggy related, "They made a decision for us. . . . We were forced to come to the conclusion that the guidance team had made. And we were never the same after that. . . . It seemed like we never recovered."

"Nick Tasler just jumped right to a conclusion without getting to the basics of the problem," Randy Shepard, the team leader, told me. In the next section we will learn how Nick remembers his role. Shepard had a very clear recollection of how the team had collected data, and were developing a recommendation when the steering committee came back to them with their own recommendation. On a positive note, Harold Miller made a lasting impression on Randy when he later acknowledged that the steering committee had erred. "Harold Miller actually apologized," Shepard told me. "He realized that the steering committee had made a mistake."

During the group interview, I sensed that the team members had never had a feeling of closure after the last meeting with the steering committee. So I raised the issue, and got rapid fire responses: Kessler, "There wasn't closure."; Olson, "We didn't know. We walked out of there and said, 'what are they going to do?'"; Bowles, "It was almost like they didn't hear what they wanted to hear." This was apparently typical of the meetings with the steering committee. Speaking on this topic, Bowles commented that, "We went to guidance team meetings, gave our presentations and walked out of the meetings not really knowing if they were happy with what we did, or what their reaction was, because they'd just sit there and look at you and wonder when you're leaving the room I guess."

The last meeting with the steering committee was actually the most difficult. "It was tense," Randy Shepard related. "Everybody [on the team] wanted to get it over with, but the steering committee wasn't totally convinced. I can remember seeing the looks on their faces." As it turned out, the steering committee did not accept the team's conclusion. They insisted on having the team collect more data. After three more months of data collection, the steering committee was left with no alternative but to accept the team's conclusion; all of the data supported the team's position.

Management perspectives (the view from outside)

Frank Simms, the Good Waste team sponsor, was not hesitant to express his feelings about the treatment the Good Waste team received from the steering committee: "The frustration was that even though the team had gone through the problem solving model, they were told, 'No they were wrong, go back and do it again.' Well, they went back and did it again and got the same results. And then Nick Tasler made his infamous comment, and that just took all those very good people and just cut them down something terrible. And you could just see it in their faces. . . . It was really hard for me to stand by and watch it happen." I asked Frank about the Tasler comment. He told me that, "Tasler basically inferred that the team had failed, that they didn't find a way to try to [totally] eliminate good waste." Simms' comment about it being hard for him to stand by and watch it happen implies that either he felt powerless to influence members of the *inner circle*, or that he was fearful of losing his job.

When I interviewed Nick Tasler, he distanced himself from the entire Good Waste issue, disclaiming any responsibility for the selection of the Good Waste assignment, or any of the subsequent problems between the team and the steering committee. He acknowledged that management did a poor job of directing the team, then he launched into his disclaimer:

I was not there when the guidance team made the choice to investigate that problem. . . . From my perspective it turned out that it was really a vague assignment. And I think that from the team members' perspective there were some management actions taken that took away the fire from the team. I have since forgotten what that issue

was. But there was something that happened that caused the team to lose confidence in management.

The issue, of course, was that Tasler continued to insist that Good Waste was a problem and that the team should implement the solution he proposed to solve this problem.

Jeffrey Lester, the TQMI advisor, told me that the Good Waste issue was one that Harold Miller thought was important. "And," Lester told me, "Harold was convinced he had a solution to it." Harold confirmed this, "I felt that there was a real problem there and something that we could help improve upon." But, after the fact, Miller acknowledged that, "the data collected by the team showed that really there wasn't an awful lot being thrown away."

Betty Miller placed the entire issue in perspective: "The Good Waste team had the typical old fashioned management way of acting affect them, and that was trying to solve the problem from the management level and not letting the team do their work. . . . Management immediately said, 'We'll make it work, we'll help those people.' . . . And they [the team members] all looked at each other and go 'we're being empowered?' That really hurt that team's feeling of worth and empowerment."

Results from the team

After meeting for nearly a year, experiencing extreme frustration with the steering committee and difficulty in getting support, the team was finally allowed to disband. The result? All the team was able to accomplish was to demonstrate beyond any doubt that Good Waste was not a problem. As a person who was not associated with the team told me, "I don't think the Good Waste team panned out quite the way they [management] expected."

Team member perspectives (after the team experience)

In the previous sections, we examined the experiences of the Good Waste team. I wanted to find out how the team members' experiences might have impacted their perspective on the organization. We begin with their commentary about the other team members.

About the Good Waste team members

How did the team members feel about other members of the team after they had completed their work?

The theory

During the process of solving problems, members of cross functional teams normally develop more favorable attitudes toward members from other departments. This phenomenon was observed by Tuckman (1961) during a review of 50 studies of small group development in a variety of settings. The model that Tuckman induced from the literature proposes that groups progress through four phases of development. Of particular relevance is the finding that the conflict that exists in the early stages of group development is overcome in the latter stages, and that ingroup feeling and cohesiveness develops (p. 396). Since the Good Waste team met weekly for nearly a year, we would expect that team members would report that personal relationships had improved during that time.

The findings

The team went through at least some of the stages observed by Tuckman. "It took a long time for people to settle into what their role on the team was going to be," Earl Jensen told me. "There were a couple of people who were very defensive about things at first, but that changed as we got going."

There seemed to be little doubt that members developed close relationships during the time they were on the team. During the various interviews, I heard comments such as:

"There was definitely good coming out of that experience . . . with the relationships that we built."

"I got to know everyone a little bit better."

"A better relationship, more of a camaraderie, more of a respect, more of an understanding."

Just having the opportunity to work with other team members on a problem seems to have contributed to these improved relationships. "I found out when I was on that team,"

Bonnie Olson told me, "that everybody here is very intelligent. I knew George, and I was really surprised that he wanted to participate so much. And Randy, the comments he made in the meetings [were so insightful]." Understanding what other members do on their regular jobs also seems to have been an important element. "My experience in the team gave me a better understanding of other people . . . what their job was," George Kessler told me. "I found out some things about their jobs that I wasn't familiar with and it gave me a better perspective." During my interview with Shepard, he told me that, "We learned more about each other in our departments. I found out things that Bonnie does that I had no idea It just blew me away." Bonnie commented on the recognition Randy had given her: "The team gave me a chance to present to people what I did in my job. I remember Randy saying, 'Gosh, I just didn't know that you had to do all of that.' And I just felt like somebody just appreciated what I did."

The findings appear to conform to the theory. There was some indication of friction at the beginning, but virtually every team member spoke in some way of how relationships had improved during the team process.

About other departments

As I mentioned in the Chapter One, I have a keen interest in the field of interdepartmental conflict. Many of these conflicts can be traced to the concept of the *Division of Labor* that is employed in virtually all organizations. As functions within organizations become more specialized, the potential for conflict increases.

The theory

Aristotle wrote about the importance of the division of labor in the fourth century BC. Adam Smith was the first to attempt a theory of the division of labor, writing about the economic advantages stemming from the division of labor in the pin-manufacturing industry (Smith, 1776).

Henri Fayol (1916) was one of the pioneers in the field of organization theory. Fayol developed management principles based on his experience as a practicing executive. The first

of Fayol's principles dealt with the "division of work," noting that specialization increases output by making employees more efficient.

The division of labor, then, creates groups of specialists. Robbins (1990) refers to this grouping as *departmentation*, and states that "departments can be created on the basis of simple number, function, product or service, client, geography, or process" (p. 86). Large organizations may actually use all six. The basic segmentation might be by function, for example manufacturing, sales, accounting. Manufacturing might be segmented by product, with individual plants segmented by process. Sales might be segmented by geography, and so on.

Organizational effectiveness requires coordination and cooperation between and among these various *departments*. Frequently, however, relationships between departments are more conflictual than cooperative. "Formal organizations inherently create functionally specialized parties. . . . Such specialization may provide efficiencies in task performances . . . but it may also lead to dissonant ideologies, fragmented interests and . . . an absence of organization integration" (Souder, 1977, p. 595). Sales people complain that manufacturing people are not customer-oriented; manufacturing people lament that marketing people have no understanding of costs. One of the findings of an analysis of conflict between engineering and marketing units by Weinrauch and Anderson (1982) was the way in which engineers and marketing people characterize each other. To the marketer, "the engineer is introverted and eggheaded," and to the engineer, "the marketing specialist is gregarious, irresponsible" (p. 295).

In a study of conflict in lateral relationships, Walton, Dutton, and Fitch (1966) found that conflict relationships between units leads to concealment and distortion in the exchange of information. Furthermore, negative attitudes toward other units prevail: suspicion, hostility, and disassociation. This strong negative effect "often leads one unit to interfere with the other unit's activities, just to frustrate the latter's goal achievement" (p. 459). The consequences of this type of conflict are dysfunctional for the organization. They also have

"deleterious effects on the psychological health of organizational participants" (Pondy, 1967, p. 307).

Research in laboratory settings, and other controlled situations, indicates that intergroup conflict can be reduced by prolonged contact between equal status members of different groups who are involved in some type of cooperative effort within a framework of institutional support (e.g., Allport, 1954; Sherif, 1966; Brown, 1988). These methodologies appear to have applicability to the reduction of interdepartmental conflict in organizations.

One of W. Edwards Deming's fourteen management principles suggests that using cross functional, problem solving teams can serve to reduce conflict in organizations.

[Management can] break down barriers between departments by encouraging problem solving through teamwork, combining the efforts of people from different areas such as research, design, sales and production. (quoted in Mann, 1987, p. 44)

The type of cross functional team envisioned by Deming encompasses several of the elements which the aforementioned research indicates can lead to reduced intergroup conflict. Organizations that have adopted Total Quality Management (TQM) concepts and practices rely on such cross functional teams to solve complex and chronic problems (Gelina, 1993, p. 3-2). One of the questions posed by this study is whether the experiences of the Good Waste team members had any impact on how they view other departments. Let us examine the evidence.

The findings

The comments offered by members of the Good Waste team indicate that they did gain a great deal of understanding about, and respect for, other departments during the time they were on the team. The office members learned that people in production departments are skilled and conscientious. "I learned a lot about the machinists and what they did," Bonnie Olson related during our follow up interview. "I thought they were just people that went there and somebody taught them which buttons to push. . . . I never knew they made any decisions

at all." Peggy Lynch made a similar comment, "I never really truly understood the talent that it took."

Similarly, people in production departments learned about the challenges faced by office employees. "I gained some respect for a couple of people's positions from the office," Edward Bowles commented. "I really didn't think they [office people] did much of anything. Paperwork, you know, but there's a lot more to it than that. An awful lot." Bowles also acknowledged that he had learned more about other production departments, "Now I appreciate everyone for what they do, and I realize that when the job ticket gets to me there will be things missing. . . . I know it's not intentional. There were times in the past when I thought that they [people in other departments] just really didn't care."

There was really no opportunity for team members to gain new perspectives about the sales department; there were no sales people on the team, and the sales department was not considered to be involved in the issue of Good Waste. Since no one had mentioned sales, I finally raised the question in my follow up interviews. I received very few comments. After the Home Plant was closed, Bonnie Olson did comment on the general feeling that people in the Home Plant had about the sales department: "Everybody hated sales. It was real negative about sales." Olson also observed that, "most of Carter's salespeople . . . my opinion of them was that they were maintainers. Most of them never went out and got new accounts."

The findings again appear to conform to the theory. People in production gained respect for the office members, and people in the office gained respect for production members. There appears to have been no change in team members' opinions about people in the sales department, but there had been no opportunity for team members to gain new perspectives about the sales department.

About management

I was interested in whether the experiences of the Good Waste team members had any impact on how they viewed "management." The team members had a unique opportunity to learn about the Carter Company's management as a result of their involvement on the team.

The theory

The concept of the *Division of Labor* referenced in the preceding section applies to the relationship between management and workers. In his landmark book The Division of Labor in Society (1893) sociologist Durkheim acknowledged the economic importance of the division of labor: "The economists . . . see in it [the division of labor] the supreme law of human societies and the condition of their progress" (p. 39). Durkheim traced the history of the division of labor and illustrated how, in most fields of human endeavor, the effect was positive. However, in his commentary on capital and labor, Durkheim stated that "in the middle ages, the worker everywhere lived at the side of his master . . . and led the same existence. . . . [However] beginning with the fifteenth century things began to change. . . . A sharp line is drawn between masters and workers. . . . [And] in the seventeenth century. . . . [with] the birth of large-scale industry, the worker is more completely separated from the employer" (p. 354-355).

Frederick Taylor's Principles of Scientific Management (1911) marked the beginning of the field of organization theory and formed the foundation for industrial engineering principles. In Taylor's view, division of labor meant that managers should plan and supervise; workers should do just as they were told. Joiner (1994) contends that "this division of labor had some advantages in the late 1800s and early 1900s but inevitably led to adversarial relationships" (p. 195). This approach is incompatible with the philosophies that underlie TQM. As Roberts and Sergesketter (1993) point out that not only is TQM a highly democratic system, "TQM is anchored in values that stress the dignity of the individual" (p. 3). The question I will pose at this point is whether the experiences of the Good Waste team members had any impact on how they viewed "management." Let us examine the evidence.

The findings

The Good Waste team members gained insights about management during their TQM training and during the time they were involved with the team. Since the Good Waste team had struggled with a non-issue for nearly a year, it is not surprising that the team members

were critical of the way management selected problems to assign to teams. They also voiced the opinion that management did not practice the TQM principles and concepts advanced in the training. Finally, the team members had several observations about Carter's management practices in general. I will address each of these three dimensions.

Selection of problems assigned to teams

The Good Waste team members were anxious to talk about the way in which team assignments were selected by the steering committee. The members felt strongly about the importance of selecting meaningful problems. "The people want TQM to work," Edward Bowles commented. "Everybody wants it to work but we're just attacking the wrong things." Juran (1989) emphasizes that the selection of first projects is vitally important. He offers specific criteria for selecting such projects.

The [first] project should deal with a *chronic* problem—one which has been awaiting solution for a long time. . . . The project should be *significant*. The end result should be sufficiently useful to merit attention and recognition [italics in original]. (p. 52)

Clearly the Good Waste project did not meet these criteria.

The team members were also disappointed that management had not given people any opportunity to be involved in the selection of problems to assign teams. "The guidance team does the total selection of problems," George Kessler observed. "The plant has no input whatsoever as to what the problems might be to work on. And I think that's wrong." This issue had to do both with the desire on the part of workers to have some input into the TQM process, and the workers' perception that they were the ones who knew what the real problems were. "The people in the plant know this company very well," Bonnie Olson told me. "We know what's going on in this company and we tend to believe that management does not know. They sit from a point of view where they have never done the jobs; they never see the jobs until there is an error or a problem." The Good Waste issue seems to lend credence to Olson's observation. As we have already seen, the *problem* addressed by this team was chosen because Harold Miller became aware of one specific job that generated Good Waste. The steering committee finally had to acknowledge, however, that the issue of Good Waste

was not a significant problem. Bowles wrapped it up very succinctly: "I knew it was a fluke job, I knew that's why they were panicking. They were all flipping out over one job."

Clearly, the Good Waste team members were not impressed with the way in which the Carter Company's management selected problems to assign teams.

Walking-the-talk

It's one thing to espouse the virtues of TQM; it's an entirely different matter to live the commitment. As a subordinate once told me, "People watch your feet, not your lips." The Good Waste team members were disappointed that Carter's management did not lead the TQM initiative by example. There seemed to be two major issues. The first involves proactively seeking input from all employees. The Good Waste team members explained that the TQM training had created an expectation that management would listen to employees. "I think a lot of people here felt that 'well, here's a chance for people in the plant to be listened to,'" Bonnie Olson began. George Kessler chimed in by stating, "That's the way we looked at it from back in the plant. . . . From people I talked with, that was a real standard feeling." "And I was really disillusioned when that didn't come about," Olson concluded.

The second issue had to do with management expecting workers to follow TQM principles and concepts; while management was perceived as not using them. "It seems like the steering committee picks out the things out of TQM that they want to use and they use those, and then the other things they just kind of ignore," Bonnie Olson observed. "I do feel we have a definite management problem in that area," George Kessler added.

In spite of the commitment Harold Miller showed by attending multiple training sessions and his insistence that everyone give top priority to TQM training and team meeting, the Good Waste team members gave the Carter Company's management low marks when it came to walking-the-talk.

General management practices

At the basic level of communication, the Good Waste team members' comments were primarily focused on Harold Miller. They frequently compared his management style to that of Ken Carter. "I've never sat and talked to Harold eye-to-eye in 11 years," Edward Bowles related. "He's never come to me and said anything to me. I think that Harold would be better off walking around the shop joking around. . . . It would be much better than somebody who walks through with eyeballs stuck [straight ahead] and then back out. That kind of makes people a little scared and on edge." "Harold has the type of personality who I feel doesn't interact with plant people very well," George Kessler offered. "I mean he'll walk by and not even look your direction. But Ken [Carter] would never come out to the plant and not hesitate to stop and visit and just pass the time of day and let you know that he was there."

The team's frustration with the Carter Company's management was perhaps best illustrated by George Kessler: "I'd just like to see anything that would help the company. I want the best for the company. But it's just they do some dumb things around here." One of the things considered as *dumb* by the Good Waste team members was a series of management decisions about the placement of some key production machines. I later heard about these decisions from people at both plants, and from both managers and workers. Even though the Carter Company's management had all completed the TQM training before initiating these moves, they did not apply the concepts and tools they had learned to this decision. This was not lost on the employees. Bonnie Olson expressed it this way, "We took all our large numerically controlled lathes, and moved them all to the Branch Plant. Then we turn around and we move one back here to the Home Plant. And what did we do then? We bought another one and put it in the Branch Plant. Why didn't we buy it and put it here and leave that one there? Why do management people do this stuff?"

Another issue that came up repeatedly during the group interview session was training. Team members saw the value in TQM training, but they felt that basic job skills training was being overlooked. "Trained people make fewer mistakes," Bonnie Olson said. "And trained people think of better ways of doing their job and doing it right. TQM will work, but you

have to have people that are trained in their jobs and know their jobs very well to make a difference."

By the time I conducted the follow up interviews, the Home Plant had closed. Bonnie was trying to make some sense out of all that had happened. Her first comment was right on target: "TQM was brought in because the company was in a really bad state." Later on she lamented the direction taken by management in the implementation of TQM. "All they wanted to hear was how you can save money," Bonnie observed. "They weren't interested in the quality of the job. . . . They were interested in cutting costs." Edward Bowles' opinions about the causes of the demise of Carter's Home Plant were similar: "They definitely should have provided more training. [And] there were too many temporary people. . . . They were just trying to save a buck. . . . They laid off 10 or 12 people a couple of years ago. . . . Those all knew their jobs. . . . Then they hired that same amount of people back . . . in a lot of cases temporary people."

In spite of the TQM training that management had received, the Good Waste team members did not see any evidence that TQM concepts and principles were being applied by Carter's management.

In search of a balanced perspective

As I read through my first draft, I realized that there was no balance in the narrative about the Carter Company's management; all of the commentary was negative. Didn't anyone have anything positive to say about the Carter Company's current management? I went back through the transcripts, searching for some type of balance. The only real positive statement I found was an acknowledgment by George Kessler that the current owners had invested in the business: "The Millers invested a lot of money trying to keep the business going." Having said that, however, George hastened to point out that, "the greatest percentage of that money was invested in the wrong places. There was no investment in manufacturing. Time and again, upper management was told that we need to spend money replacing equipment. None of that ever happened. When you spend all your investment in the office and none in manufacturing, it seems to me your fate is inevitable."

Randy Shepard, the team leader, had a unique perspective. While he acknowledged that he was frustrated with the experience on the team, he was pleased that the team leader role had enabled him to establish a personal relationship with both Harold and Betty Miller. "I can relate to them real easy," Randy said. "I don't have any problem talking to them . . . and I think they respect me for that too." Randy did, however, share the view of his team members regarding the selection of problems to assign to team. "I'd like to see them come out and ask the individuals [workers] to make suggestions for problem solving teams," Randy related. "You want to really interest people out there in TQM? Ask them what some of the problems are."

Peggy Lynch, administrative assistant to Harold Miller, had perhaps the most realistic perspective on the way the steering committee treated the Good Waste team. "The steering committee threw off our whole team," Lynch related. "They were forcing us to come to conclusion before we had even given them anything with data." "But," she continued, "I know on the other hand what they were trying to accomplish wasn't to hurt us, and I also know that they're learning just like we're learning. So I wasn't angry with anyone." When I asked Peggy what she would like to see changed to improve the overall TQM process, she responded by pointing to the need to select and solve problems that will result in big improvements. She reiterated the fact that Good Waste turned out not to be a big problem, but defended management's action by adding, "but that's part of learning." On the subject of how well Carter's management walked-the-talk, Lynch observed that people at Carter had really paid attention to management not walking-the-talk. "I try to defend that," she went on to tell me, "because I think that they are trying. They're not perfect, they're humans, they're not going to do everything right. It's tough."

Earl Jensen, the member who spoke in politically correct phrases, was difficult to pin down. By the time I interviewed Earl, I was sensitized to the Carter Company's management issue and probed deeply in an attempt to get Earl to commit himself to something. I was not successful. I asked, "Do you see management using the tools in their own jobs?" Earl sidestepped the question by responding, "I don't see them doing their jobs up close enough to

know. It's something I'm not privy to." So I took another approach, "Are people in the plant treated differently than they were before the TQM initiative started?" Earl evaded this question as well, "I don't know, I'm not close enough to it." When I asked pointed questions about the steering committee's treatment of the team, Earl would only speak about other members: "People got a little bent out of shape. . . . It kind of hurt some people's feelings." Later he commented that the steering committee, at that point in time, "didn't know not to stomp on teams." Perhaps realizing that he may have sounded critical of management, Earl quickly added, "some people thought they did. I was kind of neutral about things." The only time that Earl loosened up a bit was when we were talking about why Frank Simms attended all of the Good Waste team meetings. "Our management group doesn't have any faith in people," Earl told me. "I don't think they have the basic faith in people it takes to just say 'run with this, I'll try it with you.'"

Fred Perkins, the company controller, naturally considered himself a part of management. Fred's comment about the Good Waste team was brief and to the point: "That was a difficult assignment. Looking back, we didn't have very good direction on what we were trying to solve." On the subject of Carter's management, Fred focused on the issue of walking-the-talk. "I think we could do better by having top management utilize some of the team concepts," Fred related. "We are expecting the employees to use these tools, but we're not using the tools is what I've seen."

There was no balance to be found.

About the TQM

I was also interested in how the Good Waste team members felt about TQM as a management philosophy after their team experiences.

The theory

Roberts and Sergesketter (1993) define TQM as "a people-focused management system that . . . involves all employees, top to bottom. . . . TQM is anchored in values that stress the dignity of the individual" (p. 2-3). Similarly, Capezio and Morehouse (1993) refer

to TQM as "a management process and set of disciplines that . . . develop a culture with high employee participation" (p. 1). We would expect workers in a company practicing TQM to embrace the philosophical foundation of Total Quality Management.

The findings

During my initial interviews with team members they expressed the opinion that TQM had not yet helped at Carter, but they believed it could. "I haven't seen anything major positive come from TQM up to this point," George Kessler said. Bonnie Olson was almost wistful: "We all want it [TQM] . . . because we think it's going to save the company and do so much." "I'd like to see something come of it," Edward Bowles commented. "I haven't seen anything out of any of the teams, but I know it can work." Earl Jensen spoke of his frustration, "TQMI came in and said that TQM is going to break down the walls between management and the workers, and it did nothing like that. It didn't happen."

By the time I held the follow up interviews with the Good Waste team members, Harold Miller had announced that the Home Plant was to be closed. Team members were then focusing on what had gone wrong at Carter. They were not blaming TQM, they were blaming management. "I thought TQM would work," Edward Bowles stated, "If they would have done it right, I think it would've worked." George Kessler offered a similar observation: "I never saw a positive change in any process in that building because of TQM. TQM was of no help whatsoever. That doesn't mean that it couldn't have been."

None of the Good Waste team members had any criticism of the TQM processes, only the way in which they were implemented by Carter's management. When I held the follow up interview with Edward Bowles, he had already found a job at another company. I was intrigued by his comments about how the TQM training and experience he had at Carter was helping him: "It was great for me because it's coming down to what my position is going to be as overseeing quality. . . . I've already seen some changes in this company that I've had some influence on, and the owner of the company, he's all for TQM."

Implications for other organizations

What are the implications one might draw from the Good Waste team experience? What happened to worker morale and commitment? Were barriers between departments reduced?

The formation of the Good Waste team presented an opportunity for Carter's management to build relationships with the team members. This did not happen. The team members had great expectations at the beginning of the assignment but were completely disenchanted with management at the end. The team members did, however, gain an understanding of, and respect for other departments. The findings related to these two issues are summarized in the following sections.

Worker-management relationships

In the beginning, the Good Waste team members were enthusiastic. They were eager to contribute to the improvement of the company. When it was over, they were disillusioned and disappointed; there was no sense of accomplishment. And they blamed management.

Where had TQM gone wrong?

1. The team had no possibility of a successful outcome because they were asked to solve a nonexistent problem. Worse yet, the steering committee would not accept the team's valid conclusion that Good Waste was not a problem.
2. The team members were especially critical of management for not soliciting input from the workers before selecting the team assignment.
3. The team members had been told in the TQM training that teams would be empowered to develop and recommend solutions. The steering committee managed to completely disempower the team by mandating a solution before the team had even begun to analyze the problem.
4. The team sponsor, a member of management, attended all of the team meetings. This confirmed to the team that management did not really trust workers to study a

problem and recommend a solution. The team sponsor had also acted defensively whenever the team implied any criticism of his area of responsibility.

5. While the team received strong support from their supervisors, they received very little support from other people. Management had not adequately communicated the importance of the team's assignment.
6. Team members did not see evidence that management was walking-the-talk regarding TQM in terms of their general management practices.

There are a number of implications for organizations involved in, or considering, TQM that can be drawn from the preceding. First of all, team assignments should address important issues and have a high probability of a successful outcome. Owen (1995) studied the reasons that teams fail and observed that "if the team effort doesn't succeed, the well spews forth disappointment, cynicism, and hostility toward management" (p. 63). Furthermore, employee input should be sought as part of the assignment selection process. The team members expressed the view that they knew better than management where the problems were. Additionally, the team should be given the necessary resources and empowered to analyze the problem and formulate a recommendation without the constant surveillance of management. Finally, management must lead by example and demonstrate that they themselves utilize TQM concepts and principles.

Breaking down barriers

The Good Waste team experience gave the members opportunities to learn about each other's departments. It was clear from comments made by team members that this learning experience caused team members to have more positive feelings toward other departments. The exception was the sales department. The sales department was not involved in the Good Waste issue, nor was anyone from the sales department a member of the team. As a result, team members' negative feelings about the sales department went unabated.

The implications for organizations that want to break down barriers between departments are (1) provide the team learning experience to as many people as possible, and (2) insure that all of an organization's major functional areas are represented on each team.

CHAPTER FIVE: THE JOB TICKET TEAM

*I think everybody was real satisfied
with what we came up with.*

Team member

The Job Ticket team was the first TQM team chartered in the Carter Company's Branch Plant. This team was chartered by the steering committee at the same time that the Good Waste team was chartered in the Home Plant. The reader will note several similarities between the experiences reported by this team and those reported by the Good Waste team. There will also be a some major differences.

The Job Ticket team members seemed to have taken a very pragmatic view of the "opportunity" afforded by being assigned to the team. When I asked about their reaction to being appointed to the team, most responded with comments such as:

"I was prepared to be on a project when I was told to be on one."

"I guess I knew it was coming and it was no big deal."

"I just kind of expected to do it."

One of the team members admitted to being skeptical in the beginning. "I felt like . . . this is going to be a waste of time," he related. "But after I got into it, I was glad they gave me the opportunity."

The problem

The steering committee handed the team an extremely broad topic area. "Problems associated with insufficient and/or incomplete information on the job ticket" was the only direction the team received. The job ticket is the package of material that accompanies the job as it moves through the shop. The job ticket must have complete information about the raw material required, the steps in the manufacturing process, and any special customer requirements.

The team members were not excited about working on this "problem." For one thing, they were not convinced that it was really a problem. "I was kind of surprised about the topic," one member recalled. "I didn't feel that there was that big of a problem with it." "We really questioned whether or not what were assigned to do was really worthwhile," another related.

The team members

The team members represented a good cross section of the Branch Plant's functional areas. Let me introduce the members.

Karen Jones, the team leader, had been with the Carter Company for five years. An admitted introvert in her late thirties, Karen had begun her career with the Carter Company in production and had moved into customer service just after being assigned to the Job Ticket team. "I did enjoy it [being the team leader]," Karen told me. "I think what I liked best about being the leader was . . . the organization part of it and keeping people focused."

Gerald Mead, an assembler in his late forties, had worked for the Carter Company for 18 years. Gerald was ambitious and was clearly frustrated that his talents were not recognized by the Branch Plant management. He was outspoken and had an opinion on just about any topic that surfaced during our discussions.

Raymond Gossett, a salesman in his late fifties, had more than 30 years service with the Branch Plant. He had joined the Carter Company just after the acquisition of the Stevens Company and had always worked in sales. Raymond was skeptical of any type of initiative like TQM. In his career with the Carter Company, he had seen too many such programs start with great enthusiasm only to be discontinued.

Mary Speas, an electronics technician in her early forties, had been with the Carter Company for 16 years. "Gerald's [Mead] mom actually referred me to the Carter Company," Mary recalled. Mary had worked in several different areas and was highly respected by the other workers. She was also very outspoken.

Larry Spencer, a machine operator in his early fifties, had been with the Carter Company for 11 years. Prior to joining Carter, Larry had been in business for himself. "I did it all . . . sales, production, garbage hauling . . . me and my family and a couple of other people." This gave Larry a unique perspective. "It was a good experience [being in business]," Larry explained. "And so I probably have a grasp of why certain things happen maybe more than other production workers."

Ron Brewer, a tool maker in his early fifties, had 17 years service with the Carter Company. Ron had a quiet manner about him, but he spoke with real conviction about things that were important to him.

Don Hines, a second shift machine operator, had been with the Carter Company for 16 years, starting right out of high school. Don seemed to be very pleased with the opportunities he had been given by the Branch Plant management.

Erwin Hatch, a supervisor in assembly, had originally come to work for the Carter Company in 1976. He only stayed a year at that time, but had returned in 1989. Erwin was in customer service when the team was formed and was appointed supervisor during the time that the team was active.

This was a good group of employees. "I think they hand picked that first group," one worker told me, "for the best people that had good attitudes and open minds."

The experiences of team members (the view from inside)

In order to fully appreciate the experiences of the team members, we need to examine three different aspects of the team's activities: the actual team meetings, their efforts to garner outside support, and the meetings held with the steering committee.

The team meetings

One of the most interesting aspects of my interviews with members of the Job Ticket team was their lack of interest in talking about the dynamics of the team's meetings. They seemed to be totally focused on the *task*, and almost oblivious to the group process they had gone through. "It was pretty much all business," Larry Spencer related. "We had an agenda

and we pretty much dug right in and got to it." "Everybody had job duties for the week," Gerald Mead commented. "They would bring that to the meeting and we'd discuss it . . . and then we were all assigned duties for the next week."

When I asked about the aspects of cooperation and participation during the team meetings, the response was generally positive. "We got along fine," Ron Brewer noted. "I don't think we had any big disagreements." Don Hines recalled that "nobody slacked off and said 'I don't want to do this.'" "For the most part, everybody carried their share," Erwin Hatch commented. Then he smiled and added, "especially if we appointed it [a task]." But the team did remember going through the "storming" phase of team development identified by Tuckman (1965). "We went through a real storming phase," the team leader recalled. "People were going, 'We have a lot more problems than this problem right here.' . . . The team was fighting the whole way." Similar comments came out of the group interview. "Team members were pulling in different directions during the storming phase," Mary Speas recalled. Then Gerald Mead added, "That was a rough time."

Karen Jones took her role as team leader very seriously. "I had to make sure everybody knew how things were going to get done. . . . I had to keep things moving along . . . and keep things structured so people wouldn't lose track of what was going on." It was evident that the team members appreciated her hard work. "Karen did a good job," Raymond Gossett related. Gerald Mead observed that Karen "did a good job of keeping the work spread out." "Assigning different people to do things," Mary Speas added. "Karen was a very good organizer," Erwin Hatch observed. "She's very detail oriented . . . and fairly even tempered too." Both Ron Brewer and Gerald Myers made specific comments about Karen Jones's leadership ability. "I didn't know she had that type of leadership skills." "Her [leadership] abilities kind of surprised me. I thought she did very good."

Although the TQMI model specified that team sponsors attend team meeting only when requested to do so, Marshall Ingram attended all of the Job Ticket team meetings. I asked Marshall if he thought that his presence might have influenced how the team functioned. "I'm not an intimidating guy," Ingram told me. But then he continued, "I've been with the

company 37 years and I know how everything should work. I had to bite my tongue in those meetings. . . . I could have sat down and written out that program [the team's ultimate solution] in half an hour!"

The team members were unanimous in support of Ingram's contention that he did not intimidate the team. But that is not to say that he did not directly influence the outcome of the team's work. "I feel like Marshall kind of took over in a couple of meetings," Ron Brewer noted. "He did say some stuff that did change the outcome of it [the team's deliberation]," Don Hines recalled. "Then sometimes he just kept his mouth shut." I talked with Erwin Hatch about whether the real purpose of Carter Company's policy of having sponsors attend team meetings might be simply to provide management with control over the outcome. "I don't know. . . . There are still some 'Generals' in the Home Plant," was his reaction. "I don't think that's the way it was here. I think they [team sponsors] were just trying to keep us focused."

What the team remembered very well was the length of time it took to complete their assignment. The team met weekly for nearly nine months. "By the end of nine months, the people on the team were really glad that its end had come," Larry Spencer remembered. And during that time the team members did a lot of extra work related to the Job Ticket team. "Besides the hour meeting once a week, there's a lot of time being spent doing research, getting paperwork together, or meeting with somebody else to get the data," Mary Speas noted. Part of the frustration with the amount of time required was that the team had formulated a solution early in the process, but were asked to collect data and use the various TQM tools to confirm that they had properly identified the core problem. "About the third meeting we came up with pretty darn near the solution that we ended up with [nine months later]," Ron Brewer recalled. "Well, the way TQM works, you can't do it that way." What the team members failed to recognize was that this data collection was necessary in order to determine if the "solution" to the problem really made a difference. The scientific method is the foundation of TQM. Measurements, before and after solution implementation, are an essential element in the process.

Another cause of frustration with the amount of time required was the question in the minds of some team members about the value of the work they were doing. "When we were going through the process, we really questioned if all this time and energy was worth it," Ron Brewer noted. The time spent in working on the team had direct personal financial implications for Raymond Gossett. "I should be out seeing people . . . because I'm on commission pay," Raymond explained, "and if I'm sitting in a meeting talking about what kind of a form to use to collect data, it doesn't seem like a very good use of my time."

Getting support

Initially the Job Ticket team encountered difficulty in collecting data. After only one week of data collection, they decided to rethink the entire process. The first thing they did was focus attention on developing operational definitions; what was it that they needed to measure. The second element was training in how to collect data for all of the people in the plant. Once those steps were taken, the Job Ticket team had outstanding support from everyone in the Branch Plant. The team collected data from every production department, and over a long period of time. In spite of this, the cooperation seemed to be excellent. "I don't remember hearing anyone complain about having to do it," was a typical comment. One ingredient in the team's success in this regard was their communication about the need for data. "We made it plain and clear that we weren't pointing the finger at anybody," Gerald Mead related. "This is just information that we need to try to make things better around here."

The members also had solid support from Branch Plant management. "They gave us the go ahead to do anything we wanted," Don Hines told me. And the supervisors provided direct support. "Any time we needed something from them [the supervisors]," Mary Speas related, "they were cooperative about it."

Meetings with the steering committee

The Job Ticket team's meetings with the steering committee were recalled as very positive events. "I felt like they appreciated what we had done," Ron Brewer noted. "They

always told us that it was a good meeting . . . good job . . . you guys are doing good," Gerald Mead added. The team seemed to accept recommendations from the steering committee without feeling that the team's authority was being undermined. "They'd say something like 'you'd better go this way,' so then we'd steer that way," Gerald Mead told me. "I remember doing that a couple of times."

Management perspectives (the view from outside)

One of the supervisors in the Branch Plant told me that "they [the Job Ticket team members] are really proud that they could see what a difference that [their work] made for our company." As he continued recalling incidents about the team he related what he had observed during the "storming" phase referenced earlier. "When they [the Job Ticket team members] would come out from the meeting, they would go, 'Oh.' . . . They would yell. You knew very well that they weren't happy about it." Jeffrey Lester, the TQMI facilitator, had a similar recollection. "We had some team meetings that you swore when they left the meeting they weren't going to talk to each other," Jeffrey related. "They were screaming that this was the damndest project that ever took place. . . . It [the project] was useless."

The team members recalled that each of the team members had "carried their share" of the work. Jeffrey Lester noted, however, that Raymond Gossett's performance on the team reflected his reluctance to spend the time away from his sales job. "We had a person from sales on the team, who did minimal [work]," Lester related, "but we needed somebody from sales and he had been through the training."

You might note that there is no reference to Harry Hanson, the Branch Plant sales manager, anywhere in this chapter. Hanson was not involved with the Job Ticket team in any way. Furthermore, while he was the dominant figure in the Branch Plant, he was not considered "management." Hanson did not openly oppose the TQM initiative, he simply ignored it. "I think Harold . . . really believes in it [TQM]," Hanson told me. Hanson's only response to my inquiry about the Job Ticket team was, "they seem to devote a lot of time and energy working out some of these problems."

Results from the team

The Job Ticket team members may have experienced frustrations while they were working on the problem, but they were very satisfied with the outcome. The following comments are typical of those made by all of the team members:

"I think the final outcome is great."

"The end result was good; what we ended up with was a positive thing."

"I think everybody was real satisfied with what we ended up with."

Karen Jones, the team leader, agreed that the team had been successful. "But," she explained, "I think someone should have thought of this a long time ago. It's just a simple answer."

The only thing that disturbed the team members was that the Home Plant did not take advantage of the work done by the Job Ticket team. "They [the Home Plant] said they liked our presentation and they were going to do it," Gerald Myers related. "[But] now, I don't know." Harold Miller acknowledged that the Home Plant had not followed through on the Job Ticket team's solution. "The implementation [of the solution] in the Home Plant was maybe not as good as it should have been," Miller related. "That's probably the fault of the steering committee by not following up and making sure it happened." Then he got to the heart of the matter. "It became pretty obvious that there was some conflict there [between the plants]." Jeffrey Lester was more to the point. "It was a disaster," he told me. "The Home Plant listened to the presentation by the [Job Ticket] team members, then proceeded to tell them why it would not work."

Team member perspectives (after the team experience)

In the previous sections, we examined the experiences of the Job Ticket team during the time that they were working on the assigned problem. I wanted to find out how the team member's experiences might have impacted their perspective on the organization. We begin by looking at their commentary about the other team members.

About the Job Ticket team members

How did the team members feel about other members of the team after they had completed their work?

The theory

As I indicated in Chapter Four, we would expect that team members would report improved personal relationships with other team members as a result of the experience on the team.

The findings

The Job Ticket team clearly went through some of the stages posited by Tuckman. From what the team members told me, there was little doubt that members developed closer relationships during the time they were involved with the team. Karen Jones, the introverted team leader put it this way. "I know them [other team members] better. I always speak to them now. I just feel more comfortable around them because I know them better." Ron Brewer stated it somewhat differently. "On a personal basis," Ron related, "just being with people from the assembly area gives you a better understanding of the person."

Even Raymond Gossett, the 30 year veteran salesman who begrudged the time spent working with the team acknowledged that he had learned about other team members while serving on the team. "It gave me more of an appreciation for some of the people I work with," Raymond related. "I really didn't know them that well and I feel like I know them better now."

About other departments

There was actually no evidence that conflict between departments in the Branch Plant had ever been a serious problem. One the other hand, there was no evidence that departments had traditionally worked together to optimize overall organizational results. And I did learn that, prior to the TQM initiative, some workers had virtually no knowledge of what went on

in other departments. "There were people . . . who had never been in other departments," Mary Speas told me. "We [all] learned about other people's jobs."

The Job Ticket team collected data from every production area, and the data collection required direct involvement by the team members in those areas. As a result, the team members gained a great deal of exposure to all areas in the Branch Plant operation.

The theory

As I pointed out in Chapter Three, W. Edwards Deming suggested using cross functional quality improvement teams to "break down barriers between departments." One of the questions posed by this study is whether the experiences of the members while serving on cross functional quality improvement teams impacted how they perceived other departments.

The findings

The members of the Job Ticket team left no doubt about how the team experience had changed their perception of other departments. One aspect of the change related to getting acquainted with people in other departments. Speaking of people in other departments, Don Hines observed "you get to know them better and you change your opinion of them. . . . It was all positive." Another aspect of the change related to gaining knowledge about what went on in other departments. "I knew what went on in other departments," Ron Brewer added, "but I never appreciated how it happened. I started appreciating some of the problems they have out there." All of which leads to team work. "I think it builds a lot of team work through the company," Gerald Mead noted. "I've worked with some people in these meetings that I've never worked with before."

Karen Jones gave the cross functional quality improvement teams a lot of credit for improved relationships between departments in the Branch Plant. "I think it's getting much better. . . . There's more of an openness," Jones offered. "People aren't afraid to go into other departments and talk to each other . . . about why things are done a certain way. . . . I think that the teams were the catalyst of why it's happening."

Erwin Hatch offered an observation from his perspective as a supervisor who had been a member of the Job Ticket team. "By them [team members] seeing other people's angle of how they see things in their department, I think helped them grow quite a bit . . . by getting a better look at the whole picture versus their own department."

I posed a direct question to Marshall Ingram. "Have you seen evidence of improvement in the way team members go about their work?" Without hesitation he fired back, "Oh, yeah . . . stepping across the boundary of departments and talking to people in other departments has just been tremendous." And Ingram was not referring to casual conversation, he was referencing informal, cooperative problem solving.

About management

Another question posed by this study is whether experience as a member of a cross functional quality improvement team has any impact on how members view the organization's management. Being on the Job Ticket team gave the members a unique opportunity to be involved directly with the senior management of the company.

The theory

As I explained in Chapter Three, the pervasiveness of Frederick Taylor's view that managers should plan and supervise and workers should do the work creates an environment of mistrust between management and workers in most organizations. What I wanted to determine is whether insights gained while serving on a cross functional quality improvement team might alter that condition.

The findings

For many of the Job Ticket team members, meeting with the steering committee was their first real exposure to Harold Miller. On his infrequent visits to the Branch Plant, most of Miller's contact had been with the management team. In the following sections, I will address the team members' comments about the way management selected problems to assign to teams and the team members' perception about how the company was managed.

Selection of problems assigned to teams

Because the outcome of the Job Ticket team was considered to be positive by all of the team members, I expected that the members would give management credit for selecting good projects. Not so. The comments were universally negative. There were several issues involved. First of all, the members were critical of the types of problems selected by the steering committee; they questioned whether the problems were really meaningful to the organization. Secondly, they were critical of management for not soliciting employee input in the identification of projects. And finally, the members were disappointed that their recommendation was not adopted by the Home Plant. Katzenbach and Smith (1993) state that the keys to success in the use of teams is in the clarity of the team's charter and getting the team's recommendation implemented. The Carter Company management did not do well on either score. The original charter was vague which caused a lot of unnecessary confusion, and the team's recommendation was not adopted by the Home Plant. As Katzenbach and Smith (1993) point out, "the transfer of responsibility for recommendations to those who must implement them demands top management time and attention" (p. 246). As Harold Miller acknowledged, the management attention was missing.

"When our team was formed, it seemed to us that they just arbitrarily pulled a topic out of a hat," Karen Jones recalled. "We couldn't see the reasoning behind why they picked the topic, or why they picked the problem." Other team members felt that problems assigned to teams should provide members with the opportunities to use the tools they had learned in the TQMI training. "I don't think we've ever focused on any real production problems where you can use statistics," Mary Speas observed. "It was really hard to come up with a way to take data on the Job Ticket [problem]."

The TQMI training had stressed the value of input from people involved in actually doing the work. Yet the team members saw no evidence that there had been any worker input to the problem selection process. "I don't know how they [the steering committee] come up with the topics," Karen Jones noted. "No one has asked anybody what would help out." Gerald Mead expressed his feelings with real emotion. "It's always the steering committee

who comes up with the projects we're supposed to work on," Gerald commented. "It would be nice if they would let us come with a project to work on."

At one point during the Job Ticket team's work, the members tallied up how much time they had spent on the problem, and used the data they had collected to estimate the magnitude of the problem. Ron Brewer related the story. "We were really questioning the existence of the team," Ron explained. "We were spending \$9,000 on trying to solve a \$300 problem. . . . We had researched that." "But when we asked the steering committee about it," Larry Spencer added, "one of the members said 'don't worry about it; if it saves one \$40,000 job then it's worth it.'" That comment had a familiar ring. I asked if that person was Nick Tasler. "Yes, it was Nick Tasler," Ron replied.

Walking-the-talk

In spite of the Millers' demonstrated commitment to the TQM initiative, they did not get good marks when it came to walking-the-talk. "I don't think you can expect employees to participate in it [TQM] and then turn around and make management decisions and not use it," Ron Brewer observed. "I think people see that and then resent it." "There's things they call management decisions and then there are things that we have to do," Larry Spencer added. "They don't gather data; they just make a decision," Don Hines observed.

Between the time of my group interview and the follow-up interviews, Mary Speas was terminated as part of a general layoff at the Branch Plant. I heard a lot about Speas' departure from the Carter Company. Other workers commented that during the TQM training sessions, they had learned about applying TQM concepts to staffing decisions and did not see the application of TQM to the decision to terminate Speas. "When they let Mary go, you kind of wonder," Larry Spencer reflected. "I just don't understand taking someone with that much experience and that much ability and letting them go and keeping people that have been here two years or less with less skills and less training. . . . It just demoralizes the work force . . . erodes away your trust."

The following incident graphically demonstrates the intensity of the team members about the need for management to lead by example. I was able to attend a presentation that

the Job Ticket team members made to a local quality organization about their accomplishments. Harold Miller was in the audience. In the question and answer period following the presentation, a member of the audience asked the team to comment about the kind of management support required to make TQM succeed. Without hesitation, Ron Brewer responded. "While we were meeting to solve this problem," Ron recounted, "management moved a major machine out of our plant. . . . We sure didn't see that they were following the principles of TQM."

General management practices

Most of the comments regarding general management practices were centered on the TQM implementation. Remember that the workers in the Branch Plant did not have much exposure to Harold Miller except through his involvement in the various TQM activities. The Millers got credit for attending the training sessions. "Harold and Betty seemed so committed to it, coming to the training sessions like everyone else," Ron Brewer recalled. People also appreciated the Millers' demeanor during the steering committee meetings. "I think as far as the actual teams they have set up," Gerald Mead commented, "they really do a good job of listening."

That was the end of the positive comments. The negatives were centered on the lack of "judgment" exercised in the TQM implementation. "Harold wasn't paying attention to the things he should have been paying attention to," Ron Brewer noted. "There were times when a whole department was shut down because of the way they picked who was supposed to be in the classes," Larry Spencer added. "The biggest complaint everybody had," Don Hines related, "was how they scheduled team meetings and training sessions. . . . We're working overtime, and they wanted seven days a week, and they would shut a department down for two to three hours a day." What these workers did not seem to realize is that schedule issues are the responsibility of the Branch Plant supervisors, not Harold Miller. It almost seemed that the supervisors wanted to create these "TQM" scheduling problems and place the blame on Harold Miller.

I was interested in whether the team members perceived that the Carter Company was a better place to work following the TQM implementation. "Honestly I don't think it has made any difference," Mary Speas responded. "Not much has changed," Ron Brewer added.

In search of a balanced perspective

I found no balance in team member perception about general management practices; all of the comments were critical in nature. Prior to the TQM initiative, the Job Ticket team members had not been involved with Harold Miller. He spent most of his time at the Home Plant, and when he did come to the Branch Plant, Miller spent his time with a small group of managers. Jeffrey Lester's opinion was that the Branch Plant management did everything they could to keep Miller "at arms length" and carefully orchestrated his visits to the Branch Plant to keep him away from any direct involvement with the workers. What the team members had witnessed was what they considered the "poor judgment" in the way TQM was implemented, and they blamed Harold Miller. An important underlying element in the Job Ticket team members' perception of the company's general management practices was that the workers at the Branch Plant were extremely critical of the way in which Miller and Robert Andrews had moved equipment between the Carter Company's two plants. An ill fated attempt to make the two plants interdependent had preceded the TQM initiative. A poorly executed retreat from that strategy had taken place during the time period in which the team was meeting.

About the TQM

I was interested in how the Job Ticket team members felt about TQM as a management philosophy after their team experiences.

The theory

Since one of the underpinnings of TQM is a philosophy of employee participation, I expected that members of the Job Ticket team would embrace the concept of TQM, even though they had some criticisms of the way TQM was implemented in the Carter Company.



The findings

By the time I posed this question to members of the Job Ticket team, the Home Plant had been closed and layoffs had occurred at the Branch Plant. Ron Brewer spoke of resentment on the part of the workers in the Branch Plant. "They've cut benefits; . . . people have had wages cut; . . . people have been laid off. . . . We feel TQM is an unnecessary expense." And yet, Brewer was not negative about the basic concept of TQM. "In defense of TQM, I think it's probably a good program if it's utilized correctly," he related. Erwin Hatch voiced a similar view. "I don't think that it [TQM] is being used as good as it can be used."

None of the team members were critical of TQM, only of the way it had been implemented in the Carter Company. The total fixation on TQM training and team meetings and the lack of concern with customers was a major issue with the Job Ticket team members. "Maybe you're working on a rush job for a customer. . . . It didn't make any difference, you had to go to the meeting," Larry Spencer related. "I had a hard time with that." Mary Speas offered a similar comment. "Taking production people away from production when there was a job that a client was waiting for . . . always kind of bothered me." The team members also felt that the TQM processes were unnecessarily complex and detailed. "I think that TQM is a good idea," Karen Jones offered. "[But] sometimes you get bogged down in the details. . . . It's just common sense. . . . There's got to be a different approach."

Implications for other organizations

What are the implications one might draw from the Job Ticket team experience? What happened to worker morale and commitment? Were barriers between departments reduced?

The formation of the Job Ticket team was an opportunity for the Carter Company's management to build relationships with the team members. In spite of the fact that the Millers had demonstrated support for the team, the team members' opinion of management did not improve. The team members' experiences did, however, seem to have resulted in an improved understanding of other departments.

Worker-management relationships

The Job Ticket team had a much better experience than the Good Waste team described in Chapter Four. The team members did not feel that the steering committee had usurped the team's responsibility, and the outcome of team's work was satisfying to the team members. Nonetheless, management's relationship with the team members did not improve. If anything, it worsened. Why, when the Millers exhibited so much commitment to the TQM initiative, did team members not give them credit?

1. The condition of the business was unquestionably an important element. All of the workers at the Branch Plant were apprehensive about their future, and they did not seem to have confidence in the current management. Furthermore, they questioned the wisdom of spending money on TQM when there were more critical issues facing the Carter Company.
2. The team members also expressed concern about management's absolute commitment to having workers attend TQM training sessions and team meetings without regard to the impact on customers. To the team members, this clearly indicated a lack of judgment.
3. The Job Ticket team members, like the members of the Good Waste team, were critical of management for not soliciting input from workers before selecting the team assignment.
4. The team members did not see evidence that management was walking-the-talk regarding TQM in terms of their general management practices.

There are a number of implications for organizations involved in, or considering, TQM that can be drawn from the preceding. Kotter (1995) states that "in every successful transformation that I have seen, the guiding coalition develops a picture of the future that is relatively easy to communicate and appeals to customers, stockholders, and employees" (p. 63). The Carter Company's management had communicated no such "vision." The workers could not see how the TQM was helping. It was no surprise, then, that the team members questioned the money that was being spent on the TQM initiative. The apparent lack of

concern for customers amplified the feelings of the team members that management had exercised poor judgment in the way TQM was implemented in the Carter Company.

Employee input should be solicited before assigning problems to cross functional quality improvement teams. The final determination remains the responsibility of management, but worker input to the process is important. And finally, management must lead the TQM effort by example. Kotter (1995) notes that if management behaves "in ways that are antithetical to the vision, . . . cynicism among the troops goes up" (p. 63).

Breaking down barriers

There seems to be little doubt that the Job Ticket team members' experience helped to improve communication between departments in the Branch Plant. The team members spoke of how their perceptions of other departments changed, and the plant manager could see evidence of the improvement. Unfortunately, the team's experience did nothing to reduce barriers between the Carter Company's two plants. In fact, the rejection of the Job Ticket team's solution by the Home Plant created additional hard feelings between the plants.

The first two implications of these findings are the same as those posited in Chapter Four: (1) Provide the team learning experience to as many people as possible, and (2) Insure that all of an organization's major functional areas are represented on each team. In addition, the Job Ticket team experience suggests that when issues of importance to multiple locations are considered, workers at all of the sites should have the opportunity to become involved early in the process.

CHAPTER SIX: PERCEPTIONS AND REALITIES

*O wad [would] some Power the giftie [gift] gie [give] us,
To see oursels [ourselves] as ithers [others] see us!
It wad [would] frae [from] mony a blunder free us.*

Robert Burns, 1784

My purpose in this chapter is to contrast and compare the perceptions of the various groups of participants. I will be addressing the different realities about the Carter Company that each group or each individual constructed. In what ways do these constructed realities differ? In what ways are they shared? Had TQM changed the culture of the Carter Company? If so, in what ways?

In the preceding chapters, I provided some insights into these constructed realities: by plant, by team, and by level in the Carter Company's hierarchy. Before beginning the process of examining contrasts and commonalities, I have some additional dimensions to furnish. First we will examine comments from groups of workers who had not been directly involved with a cross functional quality improvement team at the time of my study. I refer to these as "comparison" groups. I will then provide additional insights from the managers in the Carter Company's two plants.

The "comparison" groups

I interviewed a group of individuals at each of the Carter Company's plants who had not been involved in a "formally chartered" cross functional quality improvement team. All of these participants had, however, completed the TQM training and, accordingly, had participated in a "practice" team. All of these participants were peers of the production and office workers who had participated on formally chartered teams.

The Home Plant "comparison" group

I need to begin by explaining the context of this interview. The interview took place in mid May, just two weeks before the announcement that the Home Plant was to be closed. There was an atmosphere of fear; employees could sense that something was going to happen. It was difficult to get any type of discussion going among these participants. They did not know for certain what my real mission was. Furthermore, I had the distinct impression that some of the participants did not trust each other enough to really open up, perhaps because they feared that something they said in this session would get back to one of the Home Plant supervisors. After the meeting, one of the participants, Paul Akins, pulled me aside to confirm what I already knew, that "people had not opened up." After the Home Plant had closed, I called Paul to obtain additional insight.

There were seven participants in this group. All were production employees, six worked first shift and one second shift. The group represented a good cross section of production employees. It also represented a wide range of experience levels, ranging from 25 years with the Carter Company to just over three. Some of the participants would occasionally volunteer something meaningful, while others would not respond directly even if asked. In spite of this difficult environment, enough of the group ultimately opened up to provide some meaningful insights.

This group had no problem talking about how good things were when the Carter family still ran the business.

"They never laid anybody off. "

"We were a family when Ken [Carter] was still here."

"He [Carter] would come out and talk to people. . . . They [the current owners] just don't talk, they treat you like . . . "

I took advantage of that opening to comment about some of the objectives of TQM. One participant jumped on it. "Right, take away the fear. A joke at Carter's." That seemed to break the ice and others spoke of their frustration. "Management doesn't care about what we say. They say 'you don't know what you're talking about, you're just a worker,'" one

participant commented. "That's the frustrating thing," another added. "Cause [sic] it's going to get you into trouble [offering suggestions] and you're gonna lose your job," another added. "So I choose to keep my mouth shut."

The use of untrained temporary workers was a hot topic. "Today . . . they don't care. . . . Get somebody off the street, pay 'em maybe four dollars an hour less, then generate lots of scrap," one participant observed. The conversation then turned to how much scrap was generated because temporary workers did not know how to do the work. "That's one of our serious problems [scrap]," another volunteered. "You may have three new people today and then maybe two new people tomorrow, and these people don't know their jobs."

I asked several questions about the TQM initiative. No one could cite examples of improvement. To the contrary, "there's no real evidence of any improvement that we can see. In fact, there's a lot evidence of it going in the other direction." In spite of that, most of the participants indicated a willingness, or even a desire, to be on a cross functional quality improvement team "if it was worthwhile, unlike some of the things we have going on now." It was obvious that all of these people knew the complete story on the Good Waste team. "They [the team] came back with a legitimate study . . . and told the company there was no problem," one participant related. "The company said 'There is too a problem, go back and find it.'"

Interestingly, the participant with 25 years service had worked in the Branch Plant for most of that time, transferring to the Home Plant just a year before when his machine was moved. He had not yet acclimated to the political atmosphere in the Home Plant. "In this plant, the division between departments is really great," he told me. "In the Branch Plant there's a bond. . . . Here nobody cares." All of the other comments about interdepartmental conflict were related toward the sales department. This was an area that this group clearly felt strongly about. The following are typical of the comments made about the sales department:

"Most of the sales force just don't have any idea of what's going on."

"The salesman practically points out every problem [to the customer]. . . . That happens all the time."

"The salesman will come in and act like a bigwig . . . and change something and the whole thing goes wrong."

During the course of the interview, I was able to elicit meaningful comments from all but one of the participants. Regardless of how hard I pressed him, he managed to avoid responding. As we were closing, I again zeroed in on him, "Any parting shots?" Getting only a smile, I prompted him, "Happy as a lark?" He immediately responded, "you bet!" The ensuing laughter was overwhelming.

My follow up conversation with Paul Akins added several new perspectives. For one thing, Paul believed that the TQM initiative had significantly reduced the barriers between departments. Paul also felt that TQM had resulted in improvements at the Home Plant, although he could not provide any specific examples. He was, however, critical of management for not taking advantage of worker input in the selection of problems to assign teams. Paul also told me how worker morale had declined at the Carter Company. "Over the last year, the level of trust has dropped dramatically," he related. "People do not think they are being told the whole story." Actually I had asked the group how much they knew about how the company was doing. "Not very much," was a typical response. "They're quite vague on that."

The Branch Plant "comparison" group

The openness and complete candor of the Branch Plant "comparison" group was a welcome relief after my experience at the Home Plant. There were only four participants in this group, one worked in customer service, the other three in production. Two of the participants had three years with the Carter Company, and two of them had six years of service. This was a positive and upbeat group.

It soon became clear that, to this group, "management" meant the Branch Plant managers. "We don't really see upper management [the owners] very often," one of them explained. And since this group had not been on a cross functional quality improvement team, they had no real exposure to Harold Miller. Marshall Ingram received accolades for his

support of the TQM initiative. "Our plant manager really encourages TQM," one participant offered. And the group expressed the opinion that the TQM work had helped Ingram become a better manager. "Our plant manager is more open to suggestions," another related. "I think that makes a big difference." Part of the perceived change may have been due to the increased level of communication. "Until we started doing TQM, we never had much to do with any of the managers." One participant offered. Another participant observed that Ingram "changed a lot once he got to know people." Still another suggested that "maybe he hasn't changed . . . maybe we just know him better." The final comment in this sequence of comments about the impact of TQM was particularly relevant, especially given the fact that the group all knew that the Carter Company was in trouble. "I feel less fear in my job."

This group was positive about the potential for TQM in the Carter Company. "I think it [TQM] has great potential," one participant stated. "I think it [TQM] has helped us work together," another added. They had a lot to say about how TQM had improved communication. "[TQM] has made communications so much better," one participant noted. "[TQM] has helped a lot," another added. "I was always afraid to go to customer service to ask a question; [now] I feel more comfortable." Even though communication had improved, the group had seen no evidence that TQM had improved the company's results. "The work environment is better. . . . But we have absolutely no proof that it's actually helping the company."

By the time I interviewed this "comparison" group, the Home Plant had closed and the Branch Plant had been through a layoff. The improved communications did seem to help workers in the Branch Plant cope with the situation. "With all the turmoil that is going on," one of the group offered, "I think people are a lot more relaxed than they would be . . . if people weren't as willing to talk to each other and try to hash out their problems."

The participants in this group were all looking forward to being on a cross functional quality improvement team. "I wish I had [already] been on a team," one participant commented. "I was in the first [training] group and I have never been on a team." Another added, "I had really hoped that I would be on a team [before now]." One reason for the

interest in being on a team is that the participants in this group had enjoyed the experience of being on a practice team during the TQM training. The primary motivation for wanting to be on a team, however, seemed to have been inspired by what they observed about other workers who had been on teams. "Once people were on a team. . . I'd say a lot of attitudes changed for the better," one participant noted. "I think it makes them feel more like they are part of the company," another added. And the group talked about how being on a team helped workers get to know other people and know about other departments. "Once they are on a team, they are understanding a little more as to the other departments."

The management groups

In earlier chapters, I quoted some of the key managers, primarily with regard to the Carter Company's TQM initiative. In the section, I will provide additional information about how the various management groups perceived the Carter Company, their "constructed reality." I interviewed all of the "management" participants individually. I have grouped these participants into three categories for the purpose of presenting these findings: (1) the inner circle, (2) production supervisors and managers, and (3) sales and administration managers.

The "inner circle"

Nick Tasler minced no words when I asked him about the culture in the Home Plant. "It's very hierarchical," Tasler observed. "Very precise rules and regulations, . . . telling people how to do their jobs down to the smallest unit." Betty Miller talked about the culture that had developed over time. "We are working from a past [history] of knowledge not being shared," Betty told me. "So we have that tradition of people not being empowered." These were things Harold Miller said that he wanted to change. "The thing that attracted me most about TQM was the change in management style," Miller explained. "The Home Plant in particular had been run so much top down that it really stifled anybody participating or taking responsibility." In that statement, Miller was referencing what he referred to as Charles Rector's "traditional" management style. Miller seemed oblivious to the reality that he had introduced so many formal systems that the company culture was perceived by the workers as

more stifling than when the plant had been run in a more informal way by Rector. Betty Miller was aware of this perception on the part of the employees. "People feel like we are trying to run it more like a business as opposed to the way it was run before," Betty told me. "We don't really. I think that's all perceived."

I came away from my interviews with the Millers with the distinct impression that they had not thought much about a vision, or picture of the future, for the Carter Company. When I asked Harold about his vision for the Carter Company, he responded, "A vision for the company, I guess, is to find new markets . . . develop the people . . . serve the customer." And Betty's response was "I guess to go into the next century as a strong business contributing to the community." I found it interesting that both of the Millers used the words "I guess" in their response to a question about a vision for the Carter Company.

I also asked each of the three members of the "inner circle" about the culture of the Carter Company, what it was and how it was changing. Harold Miller's only comment was that "the culture has changed somewhat since I've been here. . . . Competition has forced us to be less of a traditional family business." Tasler's was the most confident response. "I have a very clear picture of the culture of the company," Tasler related. He then proceeded to explain that while he had been able to change the culture in that part of the company for which he was responsible, similar changes had not taken place in the production areas. "It [the culture] has changed fairly well in the front end of the business," Tasler continued. "[But] these cultural changes have not been accomplished in our plant." What Betty Miller wanted was a more proactive middle management. "I would like to see a higher energy level for middle management, where they are generating more ideas," Betty lamented. "[But] it's like pulling teeth. I think that's part of the culture from the past."

Harold Miller recognized the need to share information with employees. "I try to be open and share a lot of information with employees," Harold told me. "But people still feel like maybe they're not getting all the information." Betty Miller acknowledged that Harold had not followed through with sharing information on a consistent basis. "We are very erratic about sharing information," Betty noted. "The plan was to meet with employees quarterly.

. . . I don't think we have met with them in eight months. I think it's because the times are hard." Betty also commented on the role of middle management in communicating with employees. "Another role of middle management is that they . . . carry the word," Betty related. "They have to . . . communicate to the employees so that they get the total picture."

Miller recognized that the Carter Company's two plants had very different cultures. Whereas discussions in the Home Plant were conducted in politically correct demeanor, in the Branch Plant, "they'll get into some big arguments and shouting matches," Miller noted. "They get the issues out on the table . . . they resolve them and they go about their business." Miller was aware of some of the reasons for the long standing conflict between the two plants. "When the Home Plant would take some of the Branch Plant's money . . . that did build some animosity," Miller related. Miller was disappointed that he did not get credit for investing in equipment for the Branch Plant. "When I came here . . . I put all of the new equipment in there [the Branch Plant]," Miller related. "I think people tend to forget that."

Neither of the Millers seemed to realize what was required of them to make the Carter Company successful. Marshall Ingram's comments were probably on target when he told me that he didn't think that Harold knew what it was going to take to manage the company. "I think Harold thought he could walk in here and . . . make a lot of money and things would run smooth," Marshall offered. "And I think he has found out since that it does not happen that way." The Millers also maintained a life style that was not in keeping with the condition of the business. Both drove luxury cars provided by the company. "Harold drives a BMW," one of the workers commented during an interview. The workers also noted that the Millers owned a large cabin cruiser which they kept on a lake near Olivia. The Millers' son was also provided a salary and car by the Carter Company although he had no involvement with the business. During my interview with Kevin Goodwin, the Director of the TQM Institute, I mentioned the preceding observations. His reaction was that, in his experience in working with small businesses, this type of dichotomy between the personal life style of the owner and financial condition of the business was more the norm than the exception.

Production supervisors and managers

Because the Home Plant and Branch Plant had such different cultures, I will address the perceptions of the respective production managers and supervisors by plant.

The Home Plant

Frank Simms was my primary source of information about the production perspective in the Home Plant. Fortunately I had a very comprehensive interview with him just before the Millers announced that the Home Plant was to be closed. And, I conducted two additional interviews with him by phone later. I also spoke by phone with Mack Otto, one of Simms' supervisors.

Frank Simms was Harold Miller's strongest supporter. "The Millers have done positive things for the company," Simms told me, "but the people don't look at them that way. All they look at is . . . some things have been taken away." He was dismayed by the workers unwillingness to accept Harold Miller. "A lot of people still consider them [the Millers] outsiders," Simms related. "They don't seem to realize . . . they own the company. We work for them."

On the other hand, Simms acknowledged that "at one point it [the Carter Company] was considered an excellent place to work and right now there is low morale." Simms was also frustrated with Harold Miller's management style. "Harold does not trust us," Simms complained. "He'd rather make 100 wrong decisions than take the chance that I might make the right one."

Relating his own experience with the Millers and the TQM initiative, Simms had one major complaint: the "bum rap" that he and his supervisors got for not supporting the TQM effort. "I keep hearing all the time [from the Millers] that the supervisors don't support the people in the TQM work that they are doing," Simms related. "And it's just not true. It's just a cop out that people use. . . . The supervisors were always guilty until proven innocent." What Simms meant by "cop out" was that workers who had not completed their assignment for the team would simply not attend that particular meeting and claim that their supervisor

would not let them leave their work station. "As far as Betty [Miller] was concerned," Simms told me, "all anybody had to do was say their supervisor wasn't letting them do that stuff [the TQM assignment], and immediately the supervisor is guilty." Mack Otto echoed these sentiments: "Statements were made like 'my supervisor wouldn't let me go to a team meeting,'" Otto told me. "The fact of the matter is that no supervisor ever stopped anybody from going to a team meeting."

During my initial interview with Simms, I asked about the relationships between departments in the Home Plant. With the notable exception of the sales department, Simms believed they were good. "I would say right now they are better than I have ever seen them," Simms observed. "TQM might have contributed to that because of the interaction between people and the ability for people to get to know each other." In a follow up interview with Simms after the Home Plant had closed, I came back to this issue. "My impression is that relationships between departments got better as a result of TQM," I posited, "but the situation between employees and management got worse." Simms' response was emphatic: "Oh yeah, I agree!"

Simms had a lot to say about the production-sales relationship in our first interview. He was openly critical of Nick Tasler and the entire sales department. His basic point was that the salespeople were driven by their commission and would sacrifice customer satisfaction and/or Carter Company profitability to maximize their commissions. Simms maintained that he did not share his personal feelings about the sales department with his subordinates but that similar opinions were shared by everyone in the production areas. "There is an undertone. . . . Production people are critical of sales," Simms told me, "although the conversations usually get cut short when I am within earshot."

"Sales driven" was the way that Simms depicted the Home Plant. He also contended that a significant amount of the Home Plant's rework was caused by salespeople accepting orders for parts that were beyond the plant's capability. He attributed this to both lack of knowledge and indifference on the part of the salespeople. He illustrated his point with several specific examples.

Simms also pulled no punches when I asked about the relationship between the Carter Company's two plants.

They are absolutely terrible. They [the Branch Plant] asks us to do something, and we'll bend over backwards for them, and then they'll criticize us; no matter how we do it, they'll criticize us. We ask them to do something, they tell us to get screwed, and we have to live with it. And that is exactly how I perceive it.

I asked Simms if the issue of interplant relationships was discussed at the Carter Company's management meetings. "No," Simms responded. "We are even told that supervisors are not to take part in conversations that are detrimental to [interplant] relationships. . . . What I told you about, if Harold found out, might be grounds for dismissal—using his own words." Interplant relationships was clearly an "undiscussable" issue at the Carter Company. Ryan and Oestreich (1991) use this term to describe issues that people are afraid to discuss. "Undiscussables are not talked about in the settings where they can be explored, explained, or resolved. They are the secrets that almost everyone knows about" (p. 30).

The Branch Plant

Marshall Ingram was my primary source of information about the production perspective in the Branch Plant. I had two long interviews with Ingram and both were rich in information. I also interviewed two of his production supervisors, Gary Bryant and Erwin Hatch, but their contribution to my overall information base was limited.

I was fascinated by Ingram's description of the Branch Plant in the "Pre-Miller" days. First he spoke of taking care of customers. "We got the work in here, we busted our ass, we got it out, . . . we kept the customer coming back," Ingram recalled. "Now we're getting into so many details . . ." Then he talked about the relationship between employees in the Branch Plant. "We enjoy ourselves," he said with a big grin. "Until Harold took over the company . . . at Christmas time we would take picnic tables in the back room, get a couple of cases of beer and cards and enjoy each other. [But] we can't do that now."

Even though Harold Miller had invested heavily in new equipment for the Branch Plant, something the Carter family had not done, Ingram did not have anything positive to say about Harold or Betty Miller. He was very critical of the Millers' decision process on issues ranging from equipment moves to the choice of health care providers to the smoking policy. On most of these issues, Ingram's complaint was that the decisions were made without consulting anyone in the Branch Plant management group. The smoking policy issue was one on which the Branch Plant was consulted, but their input was ignored. "We all had input, and we all got voted down," Ingram related. "Harold's wife made the decision. His wife has made a lot of decisions that people don't like."

With the notable exception of the production-sales relationship, Ingram felt that interdepartmental relationships in the Branch Plant were generally positive. He acknowledged, however, that TQM had raised the level of cooperation between departments. "People are helping other departments out," Ingram told me. "They're working with each other. I think that's been a hell of a benefit [from TQM]." "And," he added, "people are thinking more about their jobs and what can be done faster or more economical. . . . We've created some people that really think now."

While acknowledging that Harry Hanson was an outstanding salesperson who also knew the production process inside and out, Ingram was critical of the Branch Plant salespeople in general. "The other sales folks don't know what it takes to produce a job," Ingram stated. "We've tried to bring them aboard . . . we've had meetings with them, but it ends up in a shouting match." Ingram's opinions about Hanson and the other salespeople were shared by the two production supervisors. "Harry is a very demanding person, [but] does sell a tremendous amount of product, knows our process, and does an excellent job," Gary Bryant observed. But Bryant did not hold that opinion about the other salespeople. "I think our sales people feel that . . . it's their job to promise them [the customer] the world," Erwin Hatch related. "The problem is, they're not realistic about what it takes to get it done."

Interplant relationships was an important issue to all three of the production managers I interviewed at the Branch Plant. "It's not good," Marshall Ingram said of the relationship

between the plants. "I don't know if it's the culture, the distance . . . it's just . . . that place [the Home Plant] is so much different than here that you cannot believe it." Erwin Hatch also depicted the relationship between the plants as "not good." "We feel we've been on the back end," Hatch explained. "Cooperation is not there. . . . We just fight the person to schedule it [work needed by the Branch Plant]." Gary Bryant was the most vocal of the three. He was speaking in past tense because the Home Plant had been closed by the time of our interview.

We felt like a step-child. They [the Home Plant] were the home office and we felt we didn't get listened to. . . . We needed equipment and we'd be put on hold . . . and the next thing we knew, they were getting new equipment. . . . So there was animosity. . . . They were losing money and we were making money, and yet they were buying new equipment and we weren't.

Sales and administration managers

There was a dramatic difference in the perspectives of the sales and administration groups between the two plants. Nick Tasler was the consummate corporate politician and the Home Plant environment was politically charged. On the other hand, Harry Hanson was apolitical; he just wanted to sell. Hanson's dominance in the Branch Plant enabled him to keep people in that plant focused on meeting customer needs. They didn't have time to engage in politics.

The Home Plant

Joe Harris was one of the participants in this category. Fred Perkins, the Controller and one of Harris' subordinates, was another. Patricia Gale, the Chief Accountant, who reported to Perkins was yet another. Gale had started with the Carter Company in 1959 and had always worked in accounting. The remaining three participants in this category all reported to Nick Tasler. Dennis Rice, the customer service supervisor, had started with the Carter Company in 1951 and was the company's most senior employee. The other two, Carl Allen and Estell Vann, were sales managers and had only been with the Carter Company for a

short time. They had been hired by Nick Tasler, and their perspective about the company was similar to his.

Several of the participants in this group commented on Harold Miller's communication style. Dennis Rice, the Carter Company's most senior employee, contrasted Miller to the Carter family. "I don't think he [Miller] relates to them [the employees]," Rice told me. "Maybe I was more used to the Carter family . . . walking through the plant and stopping and talking to the people." It was clear that Miller was not comfortable in dealing directly with employees. "On a one-to-one basis, he [Miller] is very shy," Harris commented. Miller preferred to make presentations from a prepared script or better yet to communicate by letter. Recalling the communication about the Carter Company's need to freeze wages and lay off employees, Estell Vann was cynical. "Harold wrote a letter . . . very vague . . . basically we were going to cut our costs because of our narrowing market."

I asked Patricia Gale to give me her perspective on levels of trust and cooperation between departments in the Home Plant. "Oh, everybody's blaming everybody else," she responded. "This is the way it is . . . it's the way it's always been." This from a 36-year veteran. On the issue of sales versus production, customer service manager Dennis Rice sided with production. "The salesmen are not knowledgeable," Rice related. "A lot of them don't know what capabilities our plant can do." Rice also talked of the conflict between sales and customer service. Fred Perkins also spoke of the production-sales conflict, but did not take sides. "There is a struggle between production and sales," Perkins related. "Just too much of an us and them."

The severity of the sales issue was placed in perspective by Joe Harris. "Our sales people didn't know what type of business to look for," Harris told me in an interview after the Home Plant had closed. "I think we failed because we didn't have a market direction." Continuing on this theme, Harris placed the blame squarely on Harold Miller, "To this day, Mr. Miller has never identified sales as being the problem." Like Frank Simms, Harris depicted the Home Plant as being "sales driven." He explained that sales people received full commissions regardless of the amount of rework associated with a job. And like Simms, he

contended that a significant amount of the Home Plant's rework was caused by salespeople accepting orders for parts that were beyond the plant's capability. He also cited examples of how the delays caused by rework had alienated customers.

In response to my inquiry about the relationship between the Carter Company's two plants, Fred Perkins reflected that "I don't know why it is, but it's us and them and it's hard to break that down." Carl Allen also expressed concern. "I have some concerns about the friction between the two organizations," Allen stated. "I think it needs to be worked out."

Like the Good Waste team members, this group had a lot to say about the relationship between inadequate training and rework. "We have major rework problems," Estell Vann noted. "I mean capital R major rework problems. . . . That's what killing us." Dennis Rice agreed. "We get temporary help in here . . . consequently there are a lot of mistakes happening," Rice related. "We throw somebody on a machine, show them where the start-stop button is, and that's it."

Fred Perkins thought that the "rework problem" was hurting morale in the Home Plant. "We have a good group of people here. . . . They're working hard, they're trying to do their best," Perkins observed. "But if you see rework going up and you see you wages staying the same, and you see other problems, I could see why morale would be diminished."

The Branch Plant

Harry Hanson was one of my information sources. The other was Rita Gillam, a relatively new employee. At the time of our interview, Rita had just been promoted to manager of customer service and reported directly to Harold Miller.

Like the Branch Plant production managers, Hanson was critical of the equipment moves initiated by Miller and Andrews. "They made some mistakes," Hanson recalled. "They took a major machine out of here and moved it to the Home Plant. We lost a lot people, a lot of very good people." Hanson was also convinced that Harold Miller's quest for profitability had damaged the Carter Company's position in the market. "Harold thought that regardless of what the market was we could sell at a higher rate [price] than anyone else," Hanson related.

"I think now he [Miller] realizes that he's made some mistakes . . . and I think maybe things are going to change." Rita Gillam gave the Millers credit for their efforts to change. "I really do think they are trying very hard," Gillam noted. "In the last couple of months, he [Miller] is doing a good job of walking the talk."

Rita Gillam had an interesting perspective on the sales-production relationship in the Branch Plant. "I would characterize it as being good," Gillam told me. "The reason is Harry Hanson. The production people look up to Harry." Hanson was proud of his sales ability and his understanding of the company's production processes. "I don't even bother to turn in jobs to the estimating department if they don't fit us," Hanson stated.

With regard to the issue of interplant conflict, Harry Hanson was direct. "We are competitors [the two plants], Hanson related. "We actually compete against each other." Rita Gillam was more explicit. When I asked about relationships between the two plants, she responded, "Boy, nasty, really poor . . . where do I start?" She then proceeded to reel off story after story about how her dealings with the Home Plant had led to total frustration.

Contrasts and commonalities

We are now ready to draw some comparisons between the perceptions of various constituencies in the Carter Company. In the following sections, I will draw contrasts between these perceptions: by plant and by level in the company hierarchy. I will also point out areas where groups have common perceptions. There is perhaps only one topic on which all participants agreed: the conflict between Carter Company's two plants.

The two plants

The two plants were like two different companies. "The two plants were run as totally separate companies," Harold Miller told me, "to the point where they were writing checks to each other. And Betty Miller observed that "it was two different cultures to begin with." It was easy to see why the two plants had developed different cultures. For over 100 years, the Home Plant was managed by the Carter family and the employees experienced a high level of job security. In fact, Peggy Lynch commented during our follow-up interview that there were

a lot of "spoiled" people in the Home Plant as a result of working for so many years for a family owned business. Employees in the Branch Plant, however, had never experienced tenure-based security; job performance was the only basis for continued employment.

Even after the Millers bought the company, the cultures of the two plants continued to diverge. The Home Plant became more politicized and more formalized; the Branch Plant continued to be focused on getting work out the door to meet customer requirements. Thus it is not surprising that the perceptions of people in the two plants were so different.

The hierarchical level

There was clearly a vast difference in how various levels in the hierarchy of the Carter Company perceived the organization. I have elected to summarize the perceptions of three groups: the inner circle, managers and supervisors, and workers.

The "inner circle"

As I have defined it, the inner circle is composed of three individuals: Harold Miller, Betty Miller, and Nick Tasler. The perceptions of this group are more homogenous than are the perceptions of the other two groups.

Even though he had no ownership in the Carter Company, Nick Tasler was in some ways the most influential member of this group. Tasler believed that the Home Plant's sales organization was doing a good job and that all of the company's problems were in the production area. Actions taken by the Millers certainly implied that they bought into Tasler's logic. It was only after the Home Plant had closed that Harold Miller admitted there was a problem with the Home Plant's sales organization. "I was overly influenced by our sales [department], . . . promises of what would happen. . . . We never met those sales targets . . . missed them by a considerable amount."

The Millers wanted to change the culture of the Carter Company. They believed that TQM was a critical element in that change, and they felt that they were leading the TQM implementation by example. They attended the training sessions at both plants and Harold made it clear that TQM training and team meetings were to be given top priority.

Tasler also wanted to change the culture of the Home Plant. More specifically, he wanted to change the culture in the production areas. Tasler clearly believed that he could affect change in the culture through the use of teams. "The important concept from my point of view was to use teams as a means of accomplishing what needs to be accomplished," Tasler explained. "I was the driving force behind them [the teams] being set up to try and resolve some of these issues." The "issues" referenced by Tasler were the existing cultures in every department in the Home Plant except for sales, and what Tasler wanted to "accomplish" was to change these cultures.

The managers and supervisors

There are two important distinctions within the management and supervisory group; (1) whether the managers are sales or production and (2) whether the managers work in the Home Plant or the Branch Plant. These distinctions do not, however, even begin to explain the differences in perceptions of the various managers. Because of this diversity, there is no meaningful way of classifying individuals into groups; the perception of each individual must be considered. I will begin with the Home Plant.

Frank Simms believed that the Carter Company was essentially on the right track. He was supportive of the Millers and the changes they had made since purchasing the Carter Company. The only real problem in Simms' mind was Nick Tasler and the Home Plant sales department. Simms did, however, acknowledge that morale was down.

Joe Harris, the only manager who was privy to the full financial situation, knew that the Carter Company was not on the right track. He depicted Harold Miller as having a big company mentality and no vision for the company. Like Simms, Harris believed that the Carter Company had become "sales driven," that the sales people were focused on maximizing their commissions regardless of the impact on the company or the customer.

Fred Perkins, the Controller, knew enough about the Carter Company's financial position to understand the severity of the situation. "We need to make some tough decisions," Perkins told me. "It isn't working. Our sales for six years have been flat but our break even is

increasing." He had decided that the Millers were unwilling or unable to take the appropriate actions, and by the time of our interview he had secured a similar position with another company.

Patricia Gale, the Chief Accountant with more than 35 years service, had an interesting perspective. She mostly wanted people to leave her alone so that she could do her job. Her philosophy was that there had always been conflict between departments and that there would always be conflict. Nothing was going to change and this TQM thing was just a waste of time.

Dennis Rice, the Customer Service Supervisor who was the most senior employee in the Carter Company had fond memories of the Home Plant culture when the company was owned by the Carter family. He blamed the company's current problems on the salespeople's lack of knowledge and on the use of temporary workers in production.

Estell Vann and Carl Allen, the two sales supervisors, did not see any problems with the sales organization. In their view, the Carter Company's real problem was in production, specifically with the amount of rework. It had not occurred to them that the sales people might be responsible for at least a portion of the rework problem.

Turning now to the Branch Plant. As I comment on the perceptions of managers and supervisors in the Branch Plant, I will draw contrasts with their counterparts in the Home Plant. The Branch Plant managers have one trait in common, trust and confidence in themselves and in each other.

Harry Hanson, sales manager. Hanson's counterpart in the Home Plant, Nick Tasler, was concerned with changing the culture in the Home Plant. Hanson had only one agenda: get orders, and get the work out to meet the customer requirements. Hanson did not waste any time being critical of the Branch Plant's production department; when something was not going to suit him, he simply went to the source and corrected the problem. He was critical of some of Harold Miller's past actions but felt that Miller had learned and expressed optimism about the future.

Marshall Ingram, production manager. Ingram's counterpart in the Home Plant, Frank Simms, was Harold Miller's strongest supporter. Ingram had nothing good to say about either of the Millers. Ingram believed in the Branch Plant employees. He felt that the Branch Plant could accomplish great things if the Millers would just stay away. Another point of contrast is in regard to the respective sales departments. Simms had nothing good to say about salespeople in the Home Plant. Ingram, on the other hand, had nothing but good to say about Harry Hanson, although he was less impressed with the other salespeople.

Rita Gillam, customer service manager. Gillam's counterpart in the Home Plant, Dennis Rice, longed for the days when the Carter family owned the company. Gillam believed that the Carter Company needed to change and gave the Millers credit for making positive changes.

Gary Bryant and Erwin Hatch, the two production supervisors, believed that the company was on the right track but expressed concern about the relationship between the Home Plant and the Branch Plant. With the exception of Harry Hanson, Bryant and Hatch were also critical of the Branch Plant salespeople.

The workers

The two distinctions relevant to worker perceptions are (1) whether they had been on a team or not, and (2) whether they worked in the Home Plant or the Branch Plant.

The workers all agreed on one issue: The Carter Company's senior management did not walk-the-talk when it came to TQM. The workers also questioned the direction that the "new" management seemed to be taking the company. The production employees all seemed to agree that, with the exception of Harry Hanson, the company's salespeople were incompetent.

The primary difference in workers' perception by plant was that in the Home Plant workers did not believe that cross functional quality improvement teams had made a difference, whereas in the Branch Plant workers had seen evidence that cross functional quality improvement teams could make a difference. This difference in perception can be

attributed directly to the outcomes of the first such teams assigned in each plant. In the Home Plant, the Good Waste team was given an assignment that was not really a problem, and management compounded the error by micromanaging the team. The Job Ticket team, on the other hand, had a meaningful assignment and a successful outcome. The results achieved by each team were well known to all of the other workers in the respective plants. In the case of the Home Plant, the other workers also knew the intimate details of the team's meetings with the steering committee.

In the Home Plant, the workers perceived that management was incompetent and untrustworthy. Part of the problem is that the employees had a romantic notion about how things were under the Carter family. Even though Earl Carter had retired in 1970, "Mr. Earl" was larger than life in the memory and traditions of the workers. Workers blamed current management for everything. The other part of the problem is that current management did little to inspire confidence and loyalty.

In the Home Plant, there was no difference in the perception of management between the Good Waste team members and the "comparison" group (workers who had not served on a cross functional quality improvement team). In the Branch Plant, however, the "comparison" group differentiated between the Branch Plant "management" and the owners. The Job Ticket team members did not make this distinction. Why? Apparently because the Millers were virtually unknown in the Branch Plant except for their interaction with cross functional quality improvement teams. As a result of this exposure, the Job Ticket team members had come to the realization that the Millers did own and manage the Carter Company. Workers who had not been members of a cross functional quality improvement team only recognized Branch Plant management.

Members of both of the cross functional quality improvement teams I studied gained a greater respect for, and understanding of, people in other departments as a result of their work on the teams. In the Branch Plant there was evidence that this improved respect and understanding extended beyond the people who had been on teams.

Perceptions of the members of both cross functional quality improvement teams that I studied were similar; the members believed in the concepts but not the way that the Carter Company had gone about the implementation. Perceptions of the "contrast" groups, however, were different between the two plants. In the Home Plant, the "contrast" group's perception was the same as that of the Good Waste team members. In the Branch Plant, however, the "contrast" group were unanimous in their support of the Carter Company's TQM initiative. Why were people who had not served on a cross functional quality improvement team more positive about the TQM initiative than the Job Ticket team members? Probably because the "contrast" group had only seen the results of the Job Ticket team's work; they had not lived through the frustration experienced by the Job Ticket team members.

One additional aspect of the workers perception of the TQM implementation is worthy of note. I heard references to management's lack of "common sense" about the implementation from most of the groups, and this criticism seemed to be unrelated to how the individuals felt about TQM. Some of the comments were directed at the time required for training. "It [TQM] is really a common sense thing. . . . I don't know if spending the money to put everybody in the plant through the training is necessary." Most of the comments, however, were in regard to the cross functional quality improvement team process.

"A lot of times they won't even take the common sense answers."

"It [that problem] was so common sense that it was a joke to even have that team going."

"It was all basic common sense and we spent nine months to come up with this?"

"A lot of it is just common sense. I sometimes question how far we go with collecting data."

Implications for other organizations

The members of the inner circle all believed that they were taking actions that would lead to the desired change in culture. The problem is that, since they had not articulated any type of vision for the organization, the desired culture could not be defined. Because there

was no vision, the managers and supervisors did not have any common aim and their perceptions were exceedingly diverse, each individual had a personalized view of reality. The implication for other organizations is that attempting to change a company's culture without a unifying vision can lead to confusion and lack of alignment.

The perceptions of the workers was much more homogeneous, although they clearly differed by plant. The Home Plant workers blamed management for all their problems. The workers had no confidence that management was capable of solving the company's problems. When the TQM implementation had begun, several of the workers hoped it would make a difference. By the time this study began, they had concluded that the TQM initiative had been a failure. It was obvious that the experiences of the Good Waste team had been shared in detail with all of the workers in the Home Plant. This phenomenon is described by Kolb and Bartunek (1992).

In the private spheres of organizational activity . . . personalized accounts of concrete events get told and gossip is freely exchanged. . . . Gossip allows organizational members to hold forth and ventilate their feelings about superiors and to get support from their colleagues (p. 216). . . . The desire for social support and social confirmation of one's perceptions and feelings often leads the discussion from a sharing of individual perspectives to a collective "group mind" or group definition. (p. 220)

Thus it is that breakdowns in cross functional quality improvement teams are amplified as these experiences are retold throughout the organization. The gossip that occurs cannot be controlled by management. Similarly, the gossip about how management had made some "really dumb" decisions and had not walked-the-talk regarding TQM reinforced the workers' initial perception that this "new" management simply did not measure up to the Carter family.

In the Branch Plant, the perception of members of the Job Ticket team was more negative toward management than was that of the "contrast" group. The only plausible explanation for this difference is that the Job Ticket team experience gave the team members additional insights into how the company was actually being managed and enabled them to

observe the actions of the management team during their meetings with the steering committee.

There are two major implications for organizations planning to initiate a major change initiative. First, management must understand the commitment required and be prepared for the scrutiny to which their actions will be subjected. Secondly, management needs regular and unfiltered feedback about employees' perceptions of the organization.

CHAPTER SEVEN: SUMMING UP

The name on an institution is not important

*What does matter is the leaders —
what type of persons are they?*

Alexander F. Laidlaw, 1972

The first section in this chapter summarizes where the TQM implementation went wrong at the Carter Company. In the next section, I comment on the ways in which the cross functional quality improvement team experiences served to increase the level of trust and understanding between team members from different departments. Then I will highlight some of the changes in relationships between various groups during the Carter Company's TQM implementation. And finally, in the last two sections of this chapter, I will provide my readers with some additional perspective by recapping the significant events in the history of the Carter Company, including those that occurred after I concluded my study.

Where the TQM implementation went wrong

Harold Miller, Betty Miller, and Joe Harris, the financial officer, all commented that TQMI had come in too late, that the damage was already too severe before the TQM implementation began. Furthermore, the TQM Institute's methodology was essentially one of "continuous improvement." What the Carter Company needed was a dramatic improvement, a paradigm shift. The company had too much overhead for the level of sales. Harold Miller told me after the Home Plant had been closed that he had considered taking that step two years earlier but had been convinced by Nick Tasler that the sales organization would generate enough orders to utilize the capacity of the Home Plant. That level of business did not materialize. During the TQM implementation, management focused their attention on manufacturing process improvements, not on the company's core problem of capacity utilization.

Pitfalls in the TOM implementation methodology

A major pitfall in the actual implementation of TQM was that the Carter Company management had no clearly stated objectives or expectations for the TQM initiative. The Millers only knew that their business was in trouble and that other companies in their industry claimed that TQM had resulted in major improvements in their operations. Beyond the hope for survival, the Millers did not have any vision of what TQM might do for their company. They simply accepted TQMI's assurance that TQM would improve the Carter Company's operations and began the implementation process.

Furthermore, the Millers did not understand the extent of the commitment required of them. Kevin Goodwin, the director of TQMI, had emphasized the commitment aspect during the initial overview session, but as the TQM implementation unfolded it was obvious that the Millers did not understand the full implications of this "commitment." That management was perceived as not walking-the-talk was a major deterrent to the Carter Company's TQM initiative. It was obvious to the employees that the Millers did not use data to make decisions nor did they seek input from employees. Harold Miller also acknowledged that the Carter Company's management had difficulty in adopting a new management style, a style based on TQM philosophies.

Because the Millers could not articulate a vision of what TQM would do for the Carter Company, they could not adequately communicate with employees about the reason for initiating the work with TQMI. All the employees knew was that TQM was something that was supposed to make the company better by giving them the tools to "work on their processes." The real reason, or course, was that the Millers saw TQM as the only means of survival for the Carter Company. Unfortunately, the Millers had not provided employees with enough information about the financial condition of the company to be able to speak to this issue directly. A year into the TQM implementation, the Carter Company management initiated a wage freeze and announced the first layoff in the company's history. Since the employees had not been told at the beginning of the TQM implementation that the company was in serious financial difficulty and that management was embarking on the TQM journey in

an effort to provide long term success for the company, the employees did not understand why the company continued to spend money on TQM. The Home Plant employees, in particular, became cynical about the TQM initiative, feeling that TQM was an unnecessary expense.

Pitfalls in the use of cross functional quality improvement teams

Another pitfall is the way in which the Carter Company utilized cross functional quality improvement teams. The use of teams is a key element in the TQMI implementation methodology and was the focus of this study. As we have seen, there were major differences between the two teams.

There were two primary problems with the Good Waste team. First of all, the team was given a nonexistent problem. This situation was compounded by the fact that the steering committee would not accept this valid conclusion from the team. Secondly, the steering committee micromanaged the team, recommending "solutions" for the team to implement. At the conclusion of their assignment, team members did not have any feeling of accomplishment. Furthermore, team members were disappointed that management did not seem to be walking-the-talk regarding TQM.

In many ways, the Job Ticket team could be considered a success. In contrast with the Good Waste team, the Job Ticket team was assigned a "real" problem. The team's solution was implemented and other employees in the Branch Plant recognized the good work done by the team. An additional contrast to the Good Waste team is that members of the Job Ticket team did not express the opinion that the steering committee had micromanaged the process. I will suggest two reasons for this latter difference. First of all, the "inner circle" management was not really involved in the operation of the Branch Plant. As a result, they were less likely to feel that they knew more about the problem than did the team members. Secondly, the Job Ticket team members were more pragmatic about their assignment than were the Good Waste team members. This was likely a reflection of the difference in the plant cultures.

Team member trust and understanding

In this section I will summarize the ways in which the cross functional quality improvement team experiences served to increase the level of trust and understanding between team members from different departments. The evidence that this occurred is simply overwhelming. There is no evidence to the contrary. The next two paragraphs summarize the findings reported in Chapters Three and Four.

The Good Waste team members reported that, while there was some friction between team members in the initial meetings, relationships improved during the team process. One of the interesting points about these team members was the degree to which they spoke about how surprised they were with the way other team members participated during the meetings and how impressed they were with the job knowledge and skills of other members.

The Job Ticket team members also reported that they developed closer relationships with other team members during the time that they served together on the team. Perhaps the most interesting testimonial came from the team leader, an admitted introvert. She told me that she was more comfortable with the other team members because she had gotten to know them better, commenting that "I always speak to them now."

Organizational trust and understanding

The previous section dealt with the issues of trust and understanding between members of the cross functional quality improvement teams. In this section I will expand this discussion to deal with the entire organization. The TQM implementation process did result in reduced barriers between most departments in the Carter Company. The sales department was a notable exception. Changes in the levels of understanding and trust between various other constituencies in the Carter Company are summarized in Table 2. I will elaborate on each of these dimensions in the following subsections.

Table 2. Changes in the levels of understanding and trust during the Carter Company's TQM implementation.

Between	Change	Summary comments
Departments (excluding sales)	Improved	Gained understanding
Inner circle management and workers	Worsened	Management did not walk-the-talk
Supervisors and workers in the Branch Plant	Improved	Workers got to know supervisors better
Inner circle management and supervisors in the Home Plant	Worsened	Supervisors were accused of not supporting the TQM program
The Home Plant and the Branch Plant	Worsened	The Home Plant did not use the Branch Plant's Job Ticket team results
Supporters and detractors of TQM in the Home Plant	New dimension	Detractors would not provide data and ridiculed supporters

Between departments

As I related in Chapters Three and Four, members of both cross functional quality improvement teams gained a great deal of understanding about, and respect for, other departments during the time that they served on their respective teams. People in the production areas gained respect not only other production areas, they also gained respect for office workers. Similarly, office workers gained respect for the production areas. The one exception was with regard to the sales department. In the case of the Good Waste team, there was no opportunity for this to occur because there was no sales department representative on the team, and the "problem" that the team was assigned did not directly involve the sales department. The Job Ticket team had a salesperson on the team but he was not a very active member and again the "problem" did not directly involve sales.

In the Branch Plant, there was evidence that the Job Ticket team members did change their behavior toward other departments, and that they had been responsible for improving

relationships between departments in the Branch Plant in general. While the Good Waste team members indicated that they had gained respect for people in other departments it was not clear whether or not this had translated into different behavior. Even more uncertain was whether or not the Good Waste team members had affected overall interdepartmental relationships in the Home Plant.

Between "inner circle" management and workers

Marshall Ingram provided an insightful observation. "We've created some people who really think now." What he meant was that during the TQM training, the Carter Company's employees learned that companies should be managed with data and with input from the right people in the organization. Then, when employees saw management taking action without using data or seeking input from the individuals with the best information, they were more critical than they would have been before the TQM training. Furthermore, the TQM training raised employee expectations about forthcoming changes. When the changes did not materialize, employees were disillusioned. Before TQM, many of the Carter Company's employees were not involved directly with the Millers. When the Good Waste and Job Ticket team members had the opportunity to witness the Carter Company management in action, they were not impressed. And, at least in the Home Plant, the team members shared the details of these encounters with other workers.

The TQM implementation afforded the workers in the Carter Company with additional perspective on the behavior patterns of the owners. And these new perspectives were seemingly shared freely with other workers. The Carter Company's owners and managers did not seem to learn nearly as much about the workers as the workers did about them. This is analogous to the findings of Rollins (1985) in a study about domestic servants and their employers. Rollins found that domestics could "describe in precise detail the personalities, habits, moods, and tastes of the women they worked for" (p. 213). On the other hand, the descriptions employers gave of their domestic servants were much less insightful.

Not only did management not walk-the-talk regarding TQM, they did not ever, honestly and openly, communicate the condition of the business to the employees. The Millers had "intended" to communicate the condition of the business to the employees on a quarterly basis. When I began my investigation, Betty Miller acknowledged that they had not communicated anything for at least eight months. "I think it's because times are so hard," she told me.

About six months before I began my study, the Carter Company's Home Plant sales organization had been authorized to accept orders at lower than normal prices in an attempt to utilize plant capacity. The result was that the plant was inundated with orders that were not profitable. The plant went on a full overtime schedule. In the absence of any communication from management, the employees assumed that the company was doing better; increased business had always meant improved profitability in the past. Because the Millers had not established credibility with the Home Plant employees before the company's financial condition worsened, it would have been difficult to communicate the true circumstances to employees at that point even had the Millers been inclined to do so.

Between supervisors and workers in the Branch Plant

In the previous chapter I recounted a series of comments from Branch Plant workers about how the TQM process had improved their perception of Marshall Ingram for the better. It is not clear whether this improvement resulted from an actual change in Ingram or because the workers became better acquainted with him. In the final analysis it makes no difference; the communication between Ingram and the workers improved. There was no indication that this type of improvement occurred in the Home Plant. In fact, there is some evidence that supervisors in the Home Plant did not really change or even provide tangible support for the TQM initiative.

Between "inner circle" management and supervisors in the Home Plant

Frank Simms referenced the "bum rap" that he and his supervisors got for not supporting the TQM effort. Betty Miller was critical of all of the Carter Company's middle

management. Betty had a few "sources" of information among the Home Plant workers and she seemed to be willing to take these workers' innuendoes about lack of supervisor support at face value and go on the attack. Nick Tasler was even more critical of production managers. This was not lost on the production supervisors and managers. There are at least two reasons why this situation did not occur in the Branch Plant. First of all, the Millers spent very little time in the Branch Plant, and Betty did not have "sources" of information among the workers. Secondly, while Marshall Ingram had not been in favor of spending the money on TQM, he made every effort to make the initiative successful once the decision had been taken and was perceived as supportive by the workers in the Branch Plant.

Between the Home Plant and the Branch Plant

Nothing in the TQM implementation seemed to have a positive effect on the level of conflict between the two plants. In fact, the infamous "equipment moves" discussed in earlier chapters had the effect of intensifying the bad feelings and lack of trust between the plants. Furthermore, the fact that the Home Plant chose not to adopt the Branch Plant's Job Ticket team solution confirmed to the people in the Branch Plant that they were considered a "step-child" by the Home Plant.

Between the supporters and detractors of TQM in the Home Plant

In Chapter Three, I related how much difficulty the Good Waste team had in getting cooperation from other workers, a kind of passive resistance. Some of the "detractors" were more assertive in their opposition. "We've got some people with negative thoughts [about TQM]," Randy Shepard, the Good Waste team leader told me. "And when they know you're on a team, they'll make smart remarks like 'well this TQM thing is really a joke.' That goes on all the time." There was no indication of either passive or active resistance to the TQM initiative in the Branch Plant.

The rest of the story

The remainder of this chapter will provide my readers with additional perspective on the events that we have examined. I begin by recapping the significant events in the history of the Carter Company prior to the launching of the TQM initiative. Next, we will revisit some of the major events that occurred during the first two years of the TQM implementation. Finally, I will focus on 1995, the year in which this study was conducted. This 1995 review will include events that occurred after I concluded my study.

The Carter Company history prior to the coming of TQM: 1879-1992

Table 3 provides an overview of significant events in the history of the Carter Company from 1879 to 1992. These events are described in Chapter Two. I have already described the difficulties created by the 1992 equipment moves that made the Carter Company's two plants dependent on each other. We will soon see how the major equipment investment program begun in 1985 contributed to the Carter Company's downward spiral.

The first two years of the TQM implementation: 1993-1994

Throughout most of 1993, all of the significant events had to do with the TQM implementation. By late 1993, however, the financial condition of the Carter Company forced the Millers to initiate actions aimed at survival, not improvement. Table 4 provides an overview of the significant events that occurred during the 1993-1994 time period.

Because all of these events have been described in previous chapters, I will elaborate only on those management actions that had a major effect on subsequent happenings. The equipment move in April 1994 was truly a watershed event. The move of a large numerically controlled machine from the Branch Plant to the Home Plant unleashed a series of unintended consequences. The move was viewed as "dumb" by workers in both plants. Furthermore, Harold Miller had to admit that he had not utilized any of the TQM tools in making the decision. The decision was taken without asking people in the Branch Plant what impact it might have on their ability to get orders and deliver product. Neither Marshall Ingram, the Branch Plant production manager, nor Harry Hanson, the Branch Plant sales manager, were

Table 3. Significant events in the Carter Company : 1879-1992

1879	Herman Carter founds the Carter Company (the Home Plant)
1954	Harry Hanson founds the Stevens Company
1963	The Carter Company acquires Stevens (which becomes the Branch Plant)
1970	Ken Carter (fourth generation Carter family) named president of The Carter Company
1984	Harold Carter joins The Carter Company as the first president not from the Carter family
1985	Major equipment investment program begun. City of Jamesport approves an industrial revenue bond for financing
1986	Robert Andrews joins the Carter Company as General Manager of the Branch Plant
1988	Harold Miller becomes the sole owner of the Carter Company. Betty Miller joins the company. Robert Andrews promoted to Vice President of Manufacturing (responsible for both plants)
1991	Ken Carter retires
1992	First action taken to consolidate operations. Equipment moves between plants make the Home Plant and Branch Plant interdependent

Table 4. Significant events in the Carter Company: 1993-1994

1993	January	Carter Company management meet with Kevin Goodwin to learn about TQMI
	February	Decision taken to proceed with the TQM initiative
	April	Jeffrey Lester begins TQM training
	November	Wage increases deferred
	November	Kevin Goodwin conducts training session for the steering committee
	December	Steering committee assigns Good Waste and Job Ticket team projects
1994	January	Expense and revenue reporting combined for the two plants. Plant specific financial information no longer available to operations people
	January	Good Waste and Job Ticket teams begin meeting
	March	First real layoff in the company's history - wage freeze announced
	April	Major equipment move from Branch Plant to Home Plant
	June	Kevin Goodwin spends a half day in both plants giving motivational talks to managers and team leaders
	October	Good Waste and Job Ticket teams make final presentation to the steering committee
	October	Nick Tasler initiates "task force" teams to accelerate TQM process
	November	Kevin Goodwin gives a full day presentation to all of the Carter Company managers on management style

consulted. The "inner circle" simply decided to move the machine. The ultimate outcome of this decision will become clear as we look at 1995 events. Another watershed event was the unilateral decision by Nick Tasler to initiate "task force" teams to *accelerate* the TQM implementation process.

The final year: 1995

Table 5 provides an overview of significant events for the Carter Company in 1995. The year began with the purchase of equipment for the Branch Plant. Specifically, a large numerically controlled machine tool to replace the one transferred to the Home Plant in 1994. Several factors were involved in the decision to purchase this machine. First of all, the cooperation between the two plants was so bad that the Branch Plant literally gave up on the Home Plant and started buying parts from competitors to fill orders, often at prices that resulted in a loss to the Carter Company. Secondly, Harry Hanson convinced Harold Miller that the lack of that kind of core equipment in the Branch Plant was adversely impacting on his ability to get orders. Finally, Miller had by this time concluded that he simply had no alternative other than to make the two plants completely independent of each other.

In February, Miller got the bad news. It was clear from the 1994 results that the Carter Company could not survive. At this point, I have to do a bit of speculation about what was going through Miller's mind. Only he knows, and he did not share that with me. From what others told me, and from the way events unfolded following that time, I do believe that Miller devised a master plan that was executed as the year progressed. I will come back to this point after we review the rest of the happenings in 1995.

In March, new computers and a networking system were installed in the Home Plant. Joe Harris, the Carter Company's Vice President of Finance, related to me that he had been required to oversee the installation of this new system even after Miller (and Harris) knew that the company could not survive. "I was beside myself," Harris related. "I didn't need that distraction." Harold Miller also posted a bulletin board notice titled "We invest in the future of our most important asset: Carter people." In this notice, Miller noted that "the Carter Company has always been a company that has believed in its people." The primary message

Table 5. Significant events in the Carter Company: 1995

January	Major equipment purchased for the Branch Plant to replace the equipment moved to the Home Plant in 1994. At this point, the two plants are no longer interdependent
February	Harold Miller realizes that the Carter Company will not survive
March	New computer system installed in the Home Plant
March	Bulletin board posting about success of the Carter Company's TQM program
March	Robert Andrews leaves the company, Nick Tasler named General Manager of the Home Plant
March	Nick Tasler expands the number of "task force" teams to accelerate TQM process
April	Harold Miller finally provides overall financial information to TQMI
April	401K contributions discontinued
June	Announcement that the Home Plant would be closed
July	Layoffs announced and implemented at the Branch Plant
December	Announcement that the Branch Plant had been sold to a competitor

was that the Carter Company had invested in TQM training for its employees and boldly proclaimed that the TQM initiative was "starting to pay off."

In late March, Robert Andrews, the General Manager of the Branch Plant, left the Carter Company. This was just as I was beginning this study. Andrews was not replaced, and the Branch Plant managers began reporting directly to Harold Miller. Coincident with Andrews' departure, Miller named Nick Tasler to the new position of Executive Vice President and General Manager of the Home Plant. Tasler wasted no time in expanding the number of "task force" teams that were assigned in the Home Plant.

By April, the financial condition of the Carter Company was so bad that the Millers decided to discontinue contributions to the employees' 401K retirement plan. At the first of June the initial phase of the plan developed by Harold Miller in February was made public; the Home Plant's customer base was being sold to Sullivan Industries, a competitor in another state, and the Home Plant was going to be closed. Sullivan Industries also purchased some of the equipment and the rest was sold to other competitors. Several of the Home Plant employees, including Tasler, went to work for Sullivan Industries. The Millers provided outplacement assistance for the Home Plant employees and most of the participants in this study soon obtained other jobs. Frank Simms was a notable exception. He had been asked to stay at the Home Plant throughout the shutdown period, expecting to be offered a job by Sullivan Industries, but this anticipated job offer never materialized.

Betty Miller went to the Branch Plant to announce to the employees there that the Home Plant was being closed. She assured everyone that their jobs were secure, and that the Branch Plant was profitable. By July, however, the level of business in the Branch Plant had declined to the point that a layoff was required. After the Home Plant was closed, the Millers moved to a city that was close enough to the Branch Plant to allow Harold to commute on a daily basis. From all external appearances, the Carter Company had simply downsized by closing one plant and moving the headquarters to the Branch Plant. To add credence to this scenario, the new computers and networking system from the Home Plant were relocated to the Branch Plant.

As I was concluding my interviews at the Branch Plant, however, several employees were concerned that Harold Miller seemed to be spending a lot of time talking with a cross-town competitor, interestingly owned by the nephew of Harry Hanson, the Branch Plant's sales manager. In December, the fears of the Branch Plant employees were realized; the Branch Plant was sold to this competitor. I am not privy to the details of this transaction. I can only assume that the competitor will consolidate the two operations.

The Carter Company's proud traditions and their 116 year history had come to an end.

What really happened?

The evidence I collected during my investigation of the Carter Company does not allow me to definitively answer the question of what really happened. With that as a caveat, I can provide my readers with some understanding of the major causal factors in the demise of the Carter Company.

When Harold Miller joined the company, the Carter Company's production capacity was underutilized. Nick Tasler convinced Miller that he should increase the size of the sales department and expand their geographical coverage. Tasler also got Miller's agreement to reduce prices in order to obtain new business from existing accounts. These actions did increase the Carter Company's profitability. The increased utilization of plant and equipment more than made up for the lower margins. The problems began when Miller began to invest heavily in new equipment, expanding production capacity. Now the Carter Company had a cost structure that could not be supported by the low prices that had become the norm. Worse yet, sales leveled off and by 1994 were actually declining. At that point, Miller decided to discontinue some of the low margin business in an attempt to increase profit levels. This only further depressed sales levels and profitability.

The decision to invest came easily for Miller. "Harold had a big company mentality when it came to money," Joe Harris told me. "He just kept borrowing to buy more equipment with no thought of how it might be paid back." And it wasn't limited to production equipment. As I mentioned earlier, the Millers both drove luxury cars provided by the company. And, the Millers owned a turboprop airplane that they leased to the Carter Company for the purpose of transporting customers. In 1993, Miller decided that the Carter Company should have a second plane. This second plane was sold in 1994 due to the deteriorating financial condition of the company.

It was after the Home Plant closure was announced in June that I was told by Joe Harris that Harold Miller had known in February, after receiving the final 1994 results, that he would have to liquidate the company. I asked him to speculate as to why Miller had agreed to



allow me to conduct my investigation. "I don't know," Harris told me. " He [Miller] did many things in the last six months that look like a smoke screen."

When I spoke with Miller after the Home Plant had closed, he acknowledged some mistakes.

There are some things that I certainly would have done differently had I known what I know now. I was overly influenced by . . . what would happen if we did certain things. We never met those sales targets, missed them by a considerable amount. . . . We should have been more conservative . . . scaling back the company to match what we really were achieving as opposed to what the salespeople hoped to achieve. . . . Looking back at it, one of the options we had was to shut the Home Plant down [leaving us] with a good solid core of business that we could run and be profitable. Looking back, I think we would have prospered under that scenario.

The closing line in this quote provides a clear indication that the Carter Company would not survive. And yet, during that interview, Miller carried on a pretense that he was planning for the long term. He told me, for example, that he was actively considering a profit sharing program for the Branch Plant. In fact, he told me that he was conducting a survey of the Branch Plant employees to see how they would like to see a profit sharing plan structured. I learned later that the Carter Company had a negative net worth at that point and that the bank was providing funding on an interim basis while the details of the sale of the plant were being worked out.

As I thought about Joe Harris' comment about the "smoke screens," it became clear that Miller had to maintain the pretense that all was well in order to carry out his plan for an orderly disposition of the business. To maximize the price received from Sullivan Industries, for example, Miller could not let them know that he had no other options. The same is true for the sale of the Branch Plant. He also needed to portray a positive image to both customers and employees. In order to make this transition, the Carter Company needed a continuing stream of orders from customers and a cadre of people to fill these orders.

Did the plan Harold Miller developed in February, 1995 work out to his satisfaction? I have no way of knowing. I do know that the Carter Company provided the Millers a good life style from 1984 until 1995. From what I could ascertain, they did not ever make any substantial investment in the company; the payback to the Carter family came from the profits generated by the Carter Company during the early years that it was owned by the Millers. And what of Harold Miller today? He and Betty have moved to his Colorado home, and he is the "Rocky Mountain representative" for Sullivan Industries.

CHAPTER EIGHT: CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

When TQM programs fail, it is because they are mounted as programs, unconnected to business strategy.

Rosabeth Moss Kanter, 1994

When I was planning this research, one of my primary objectives was to design a study that would add to fundamental knowledge, while at the same time providing meaningful information to TQM practitioners. The *Conclusions* section of this chapter summarizes the findings of the study, addressing what happened in the Carter Company during the TQM implementation. In the *Implications* section, I suggest ways in which the findings of this study might have applicability to other organizations. This section is primarily directed to TQM consultants and senior management in client organizations. The *Recommendations* section suggests directions for further research.

Conclusions

The initial focus of this research was on cross functional quality improvement teams and how they might help to reduce the level of conflict between departments. The first conclusion to be drawn from this study is that the two teams I studied did appear to help break down barriers between departments. During the course of this study, I also discovered other important issues related to the way in which TQM was implemented in the Carter Company. There are additional conclusions related to these issues. First of all, there seemed to be something lacking in the way in which the TQM initiative was led. Secondly, the TQM initiative did not appear to consider the needs of all the relevant stakeholders. Finally, one might conclude that the TQM process itself was not appropriate for the Carter Company, at least at the time it was introduced. I will elaborate on each of these four conclusions in the following sections.

Teams helped break down barriers between departments

The members of both teams studied reported that their experiences while serving on the teams caused them to have more positive feelings toward other departments. As team members learned about what people in other departments did, they developed new and more positive perceptions of other departments; people in production gained respect for office functions, and people in the office gained respect for production departments. "I never understood the talent it all took" was a typical comment.

In spite of these positive feelings, there was no real evidence in the Home Plant that the Good Waste team members had been able to translate their experiences into a plant-wide improvement in interdepartmental cooperation. In the Branch Plant, however, there was evidence of improved relationships between departments. "There's more of an openness," I was told by the leader of the Job Ticket team. "And," she continued, "I think that the teams were the catalyst of why it's happening." The team leader's opinion was confirmed by the plant manager as he related how people were now "stepping across the boundary of departments and talking to people in other departments."

Management did not effectively lead the TQM initiative

In some respects, the owners of the Carter Company appeared to exhibit leadership regarding the TQM initiative. The Millers demonstrated their commitment to the training effort; their presence at training sessions was noted and appreciated. They also made it clear that TQM was the Carter Company's top priority, and that nothing should take precedence over attending the training sessions or attending team meetings. And they made it clear to supervisors that workers were to be given time to attend team meetings and to prepare for these meetings. Furthermore, the Harold Miller showed appreciation for the work done by the teams. All of the team members recalled that meetings with the steering committee closed with a words of "thanks" and "well done" from Harold. And yet, the workers were unanimous in their view that the Carter Company's management did not walk-the-talk regarding TQM. What the workers observed was that there had been no change in the

Millers' personal behavior. The Carter Company's management did not demonstrate that they used the TQM tools in making decisions, nor did they seek inputs from others in their decision processes. From these observations, the workers concluded that the Millers were not truly committed to the TQM initiative. While the workers' conclusion about the lack of commitment may not be valid, it seems clear that the Millers did not understand what was required to effectively lead the TQM initiative.

Comments from both Harold and Betty Miller confirmed that they somehow expected the organization to improve without any effort on their part. Harold thought that TQM would make his job easier "because people would be making their decisions at a lower level in the company." And yet, there was no indication that he had done anything to empower people in the organization to take on additional responsibility. If anything, the level of trust seems to have declined during the TQM implementation process. Similarly, Betty expected middle managers to come forward with "visions" for the company. However, as Joe Harris related, "she's never given us the tools or the opportunity to do that."

The needs of some important stakeholders were not addressed

The Carter Company's TQM initiative did not appear to consider the needs of customers. The lack of attention to customers was inexplicable. Once the Millers decided not to downsize the Carter Company, their only real hope of survival was to dramatically increase the level of sales. But, with the exception of the sales manager at the Branch Plant, none of the Carter Company's managers ever talked to me about customers. They talked about cost, waste, processes, but not about the needs of their customers.

Furthermore, the TQM effort did not address the needs of employees in any meaningful way. During the training process, employees were exposed to new philosophies and concepts. However, with the exception of serving on cross functional quality improvement teams, employees did not have any opportunity to apply what they had learned. From the employees' perspective, conditions deteriorated after the TQM initiative began.

Layoffs and the extensive use of unskilled part-time replacement employees followed by a wage freeze undermined employee loyalty. Morale declined as did the level of trust.

The TQM process was not appropriate to the situation

TQM does not appear to have been the right agenda for the Carter Company. The company was in financial difficulty and excess manufacturing capacity was draining the company's remaining reserves. The Carter Company needed to either dramatically increase sales or go through a major downsizing. Neither of these alternatives was selected. Nick Tasler convinced Harold Miller that his sales group would increase the level of sales but nothing changed. And, as a sage once said, "If you always do what you've always done, you will always get what you've always got." Instead of addressing the company's most critical problem head-on, the owners elected to implement a continuous improvement program, even though they understood that it would take two years to see any benefit. The type of TQM process initiated in the Carter Company could not have been expected to provide a short term solution to the Carter Company's capacity utilization problem. Furthermore, the time and cost associated with the TQM implementation placed an additional financial burden on the organization.

Implications for organizations considering TQM

In this section, I suggest ways in which the preceding conclusions might have applicability to other organizations. *Implications for Other Organizations* sections were also provided at the end of Chapters Three, Four, Five, and Six.

Cross functional teams can help break down barriers between departments

The use of cross functional quality improvement teams appears to be a viable part of an overall TQM implementation strategy. The primary purpose of such teams, of course, is to "work on complex and chronic problems and arrive at permanent solutions" (Gelina, 1993, p. 3-2). The results of this study indicate that such teams can also help to reduce barriers between departments.

In earlier chapters I commented on how the Carter Company's cross functional quality improvement teams could have been improved: providing more meaningful assignments, obtaining input from employees about potential assignments, increasing the clarity of the assignment, avoiding micromanagement of the team by the steering committee, and insuring that all of the organization's major functional areas be represented on each team. Perhaps the most important issue regarding teams, however, is to limit the number of such teams. As Scholtes (1995) points out, the use of improvement teams should not be overdone because "to successfully undertake these efforts requires considerable support from the entire organization" (p. 57).

Effective leadership is essential

Effective leadership is the central element in successful TQM implementations. As Johnson (1993) states, "The main catalyst that fuels TQM is leadership" (p. xvii). And what constitutes leadership? "Leadership is the process of persuasion or example by which an individual (or leadership team) induces a group to pursue objectives held by the leader or shared by the leader and his or her followers" (Gardner, 1990, p. 1). Implicit in this definition of leadership is that some *objectives* have been established. People cannot be persuaded to pursue objectives that are not clearly defined.

In my experience, leadership requires *both* persuasion and example. The most challenging aspect of leading any type of change initiative is the latter: walking-the-talk. While the Millers demonstrated their commitment to the TQM initiative in several ways, the perception of the workers was that the Millers did not walk-the-talk. The reason for this dichotomy was that the Carter Company's management, and the "inner circle" in particular, did not exhibit leadership in terms of changing their personal behavior. Management wanted the organization to change, but their actions signaled that they personally resisted change. O'Toole (1995) provides some perspective on this phenomenon. He explains that the focus of leadership studies in business has emphasized how management can overcome employees' resistance to change. O'Toole contends that this emphasis is misplaced, that the far greater

problem is overcoming resistance to change on the part of senior management. O'Toole credits Lee Iacocca with capturing the essence of this resistance to change for those in positions of power. "From Wall Street to Washington, from boardrooms to union halls, what anybody with power is most scared of is change. Any kind of change" (p. 239).

Management behavior must change to achieve real success with TQM. Jradesky (1995) contends that inappropriate management behavior is one of the primary pitfalls in a TQM initiative. "Executives . . . do not appreciate . . . how their role modeling will influence the outcome of the TQM implementation" (p. 30). Managers cannot espouse the use of TQM concepts and tools for others while refusing to use them in their own decision making process. "Management loses credibility and support when it says one thing but does another. For example . . . when it implements SPC in manufacturing but does not use SPC in its analysis and response to information" (Hoover, 1995, p. 86). Atkinson (1990) comments that "most people are 'boss watchers.' They watch to see what the boss does" (p. 45). And if the boss fails to walk-the-talk, there is little chance that others will be convinced that TQM is worth the effort. The need for personal change does not receive enough attention in most of the writings about TQM. For example, Juran (1989) compiled a comprehensive executive handbook dealing with leadership for quality. In this handbook, Juran lists a myriad of *tasks* for upper managers. Each of these tasks is prefaced with phrases such as "upper managers should see to it that," (p. 79) or "upper managers should direct that," (p. 79) or "upper managers should assure that" (p. 143). Nowhere does he comment on the need for upper management to demonstrate to the organization that they use TQM concepts and tools for their own decision making.

Deming (1993) explains that the first step in organizational transformations is transformation of the individual. Once people truly internalize the philosophies of TQM, they

will apply these principles. According to Deming, transformed individuals will:

Set an example

Be a good listener . . .

Continually teach other people

Help people to pull away from their current practice and beliefs . . . (p. 95)

Such individual transformations take time. Ironically there was some evidence that Harold Miller was changing just before the Carter Company ceased to exist. "By mid 1995," Jeffrey Lester told me, "I saw changes for the better in Harold Miller. I believe he appreciated his employees more. He was more personable." Then a bit wistfully, Lester concluded: "Maybe given more time, things would have worked."

In summary, managers in organizations embarking on TQM transformation journeys must be committed to providing the leadership required to make the initiative a success. And a critical aspect of this "leadership" is the need for managers to undergo personal transformations, to become leaders by example.

The improvement process should address the needs of all stakeholders

The three most important stakeholders of an organization are its customers, employees, and owners. While there are other important stakeholders, these three constitute the essential elements of an organization. The needs of each of these groups must be addressed in order for the organization to be successful.

The Carter Company's TQM initiative did not seem to address the needs of customers. Ironically, many of the Carter Company's workers expressed concern for customers and the adverse impact that some aspects of the TQM implementation may have had on these customers. A recent feature article in Business Week ("Quality," 1994), examines why so many companies fail to realize improvements from TQM initiatives. Their conclusion is that many organizations have confused *process* with *purpose*, have become obsessed with methodology, and have failed to consider the customer. "Quality that means little to customers usually doesn't produce a payoff in improved sales, profits, or market share. It's

wasted effort and expense" (p. 55). The implication for other organizations is that being successful at TQM requires that customers be central to the implementation effort and that the organization's resources be focused on the customer. As Hoover (1995) observes, "for TQM to ultimately succeed . . . efforts must be focused on meeting and exceeding customers' needs" (p. 85).

The TQM initiative also seems to have ignored the needs of employees. As a result, even the most loyal of the Carter Company's employees became cynical and morale declined. The use of unskilled temporary workers, intended to reduce costs, appears to have resulted in major rework and scrap problems.

In summary, it appears that the only stakeholder considered by the Carter Company's TQM initiative was the owner's. Paradoxically, by ignoring the interests of other key stakeholders, the owner's interest was not well served. Reichheld (1996) points out that experienced employees and customers are the most critical of a firm's assets and argues that companies need to prevent customer and employee turnover. "The very best companies will reach beyond the manufacturing target of zero defects and build customer and employee retention systems aimed at zero defections" (p. A14).

The improvement process should be "appropriate" to the situation

The most important implication from this study is that improvement methods must be appropriate to the situation. The TQM process initiated by the Carter Company did not address the company's most critical problem. The owners seem to have selected the TQM Institute's methodology based on what they learned about TQMI from other companies, without regard to the Carter Company's actual needs at the time. Since the selection of an organizational improvement program is a multi-faceted process, I have synthesized an *organizational transformation* model to provide a heuristic framework for examining how the Carter Company might have selected a more appropriate improvement program. The model shown in Figure 3 depicts a seven step transformation process. I will address each of these steps in a generic sense, then as they apply to the Carter Company's TQM initiative.

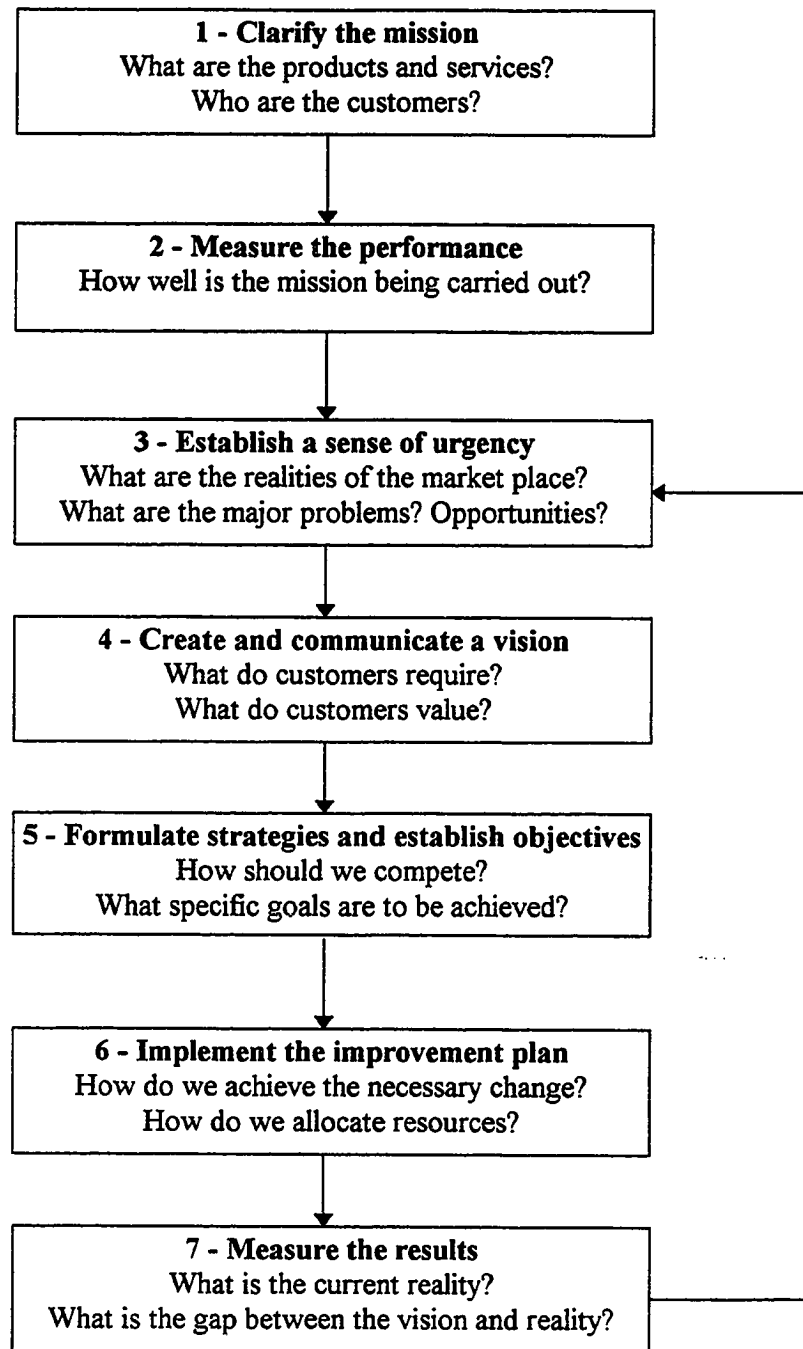


Figure 3. Organizational transformation model

Step one: clarify the mission. The leaders of an organization need to clearly define what business they are in and who the organization's customers are. They must also gain an understanding of what these customers require. It is essential that a company "understand what it provides in terms of value to the customer" (Parr & Hild, 1995, p. 106).

The owners of the Carter Company did not have a clearly defined mission regarding their products, not did they seem to have any clear picture of what value they provided to their customers.

Step two: measure the performance. After clarifying the mission, the organization needs to determine how well it is meeting its commitments and obligations to these customers. Comparing these results to the desired level of performance creates a "gap" which serves as the basis for establishing a sense of urgency throughout the organization.

The owners of the Carter Company did not have any reliable means of measuring how well they were performing for their customers. And it seemed that they were averse to establishing meaningful measures of operations and financial performance.

Step three: establish a sense of urgency. This sense of urgency may be driven exclusively by the customer performance "gap" derived in step two. Alternately it may be driven primarily by the company's financial condition. A sense of urgency need not be related to a problem. Frequently companies create a sense of urgency about the need to capitalize on a new opportunity. The Xerox Corporation, for example, launched a "crisis of survival" quality initiative in 1983 that is credited with saving the company from extinction. In 1994, Paul Allaire, Xerox Chairman and CEO, announced a new initiative—to address a "crisis of opportunity" (Leo, 1996, pp. 65-66). Whatever the driver, the company's leaders need to communicate the information in a dramatic fashion to all members of the organization.

The financial condition of the Carter Company was "urgent" when the TQM initiative began. But for some reason, Harold Miller was unable to express this urgency. Perhaps he did not want to admit to himself that the company was in such poor condition. Jeffrey Lester told me that it was not until the spring of 1995 that Miller began to demonstrate a sense of urgency. By this time it was too late.

Step four: create and communicate a vision. First a few caveats. Developing a vision takes time; it cannot be done quickly. Secondly, a vision requires inputs from all stakeholders, especially employees. Finally, a vision statement developed to impress investors, customers, or the community at large will not be of much value. The purpose of a vision is to achieve alignment and to insure that each employee understands his or her contribution to the vision. An effective vision addresses the things that are valued by the organization's customers. A vision should be easy to communicate, and it should be communicated extensively and continuously.

The Carter Company's owners did not have a picture of the future that could be communicated to employees. There was no evidence that any attempt had been made to develop such a vision. Certainly there had been no participation below the manager level.

The implication for other organizations is that they need to develop a vision or picture of the future that is easy to communicate, one that appeals to the needs and values of employees. Creating a meaningful vision requires active participation by all levels of the organization. Such a vision "says something about the direction [in which] an organization needs to move" (Kotter, 1995, p. 63). Just having a vision, of course, is not sufficient. That vision must be effectively communicated. "A vision held only by its leadership is not enough to create any real change. . . . Management must continuously—and creatively—articulate the company's vision and goals. . . . And facilitate a two-way flow of information" (Bemowski, 1996, p. 43).

Step five: formulate strategies and establish objectives. Strategy includes both the goals of an organization and a course of action that provides means of achieving these goals. Companies can decide to compete on the basis of market differentiation, cost, innovation or a host of other dimensions. The strategy formulated by the organization must, however, reflect the competencies of the organization and the realities of the market place. An organization's strategy must then be directed toward the achievement of specific objectives. As with vision, the validity of the organization's objectives can be increased by ensuring that input is received from all stakeholders. Objectives should be tangible, verifiable, and measurable.

The capabilities of the organization have to be considered when formulating strategy. Even had the Carter Company been in good financial condition, TQM may still have been inappropriate. The lack of basic job skills might have impeded the TQM initiative regardless of how well other elements of the implementation were executed. Hoerl (1995) suggests that organizational transformation efforts fail because managers "often want to jump to the latest and most sophisticated methods first, without developing a sufficient foundation on the basics" (p. 63). He likens this to attempting to teach calculus before algebra. Hoerl outlines a four step organizational development model: basic job skills, individual problem solving, team problem solving, and innovation. He maintains that attempting to bypass any of these steps will typically lead to failure. The same thought is expressed by Cole (1994) "Each element in the quality house must be seen as a building block so that one effort builds on the next" (p. 83). But much of American management has trouble understanding the need for building a solid foundation. The Carter Company is not unique in neglecting basic skills training. Dertouzos, Lester, and Solow (1989) state that "the American system of on-the-job training is called 'following Joe around,' and it does not work" (p. 21).

After appropriate strategies are formulated, clear objectives need to be established. Bohan (1995) states this essential truth in very simple terms: "If TQM is to work, there must be something that leadership wants to see get better. . . . The successful organization will carefully define those things that need to be improved" (p. 89-90). The objectives of the TQM initiative at the Carter Company were not clear. The owners adopted TQM as a means of salvaging the company but did not define or articulate their expectations. The TQM effort in the Carter Company was started as a "program" that was not part of the company's business strategy. In the absence of a vision or picture of the future that can be shared with all employees, "a transformation effort can easily dissolve into a list of confusing and incompatible projects that can take the organization in the wrong direction or nowhere at all" (Kotter, 1995, p. 63). The myriad of teams initiated by Nick Tasler, against the advice of TQMI, provides evidence that the Carter Company did not have clear and consistent direction for the TQM effort.

Step six: implement the improvement plan. For many organizations, TQM will be the right "improvement plan." The first five steps in the organizational transformation model establish the direction, then "TQM provides the analytical tools that turn data into a lever for improvement and a guide-line for action" (Jradesky, 1995, p. 18). For other organizations, TQM may not be the appropriate agenda for intervention. Even when TQM is judged to be the right program, it is important to recognize that "although some consultants may want people to believe otherwise, a quality process is not an off-the-shelf item" (Dingus & Golomski, p. 12).

The implication for other organizations is that they need to select a corrective action program that is appropriate to their situation, not blindly adopt programs that have worked for others. The implication for consultants is that they need to insure that their "prescription" will help the organization, not hasten its demise. These words from the Oath of Hippocrates⁴ are appropriate: *I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious.*

There is also a need for continuing to communicate the vision throughout the implementation process. As Kotter (1995) points out, "Without credible communication, and a lot of it, the hearts and minds of the troops are never captured" (p. 63). Leaders need to communicate in a variety of ways. One of the ways that leaders communicate is by example. If senior managers behave in ways that are contrary to the vision, belief in the other communications will be diminished.

Step seven: measure the results. In step five, I mentioned that objectives should be tangible, verifiable, and measurable. The reason for measurement is not simply to keep score; it is to learn. Senge (1990) contends that achieving superior performance requires superior learning. In step four, I emphasized the need to create a picture of the future, a vision. In step seven, we measure results to obtain an accurate picture of current reality. Senge (1990) explains that learning starts from "seeing clearly where we want to be, our 'vision,' and telling the truth about where we are, our 'current reality'" (p. 9). This step provides the basis for

⁴Hippocrates was a Greek physician (460-377 BC) who is considered to be the father of medicine.

continuous organizational improvement. As indicated on Figure 3, the "sense of urgency" in step three is continually refreshed by the "gap" established in step seven.

The Carter Company had neither a "vision" nor a measure of their "current reality."

Summary

There are four major implications of this study. First of all, the effective use of cross functional quality improvement teams can help to reduce barriers between departments. Secondly, managers in organizations embarking on TQM transformation journeys must understand and be committed to providing the leadership required to make the initiative a success. Next, improvement programs need to address the needs and interests of all stakeholders. Customers should be central to the implementation effort; the organization's resources need to be focused on the customer. Finally, selecting the right "improvement" program is essential. Organizations need to select the corrective action agenda that is appropriate to their situation, not blindly adopt programs that have worked for others.

Recommendations

I mentioned earlier that, while organizations are making huge investments in various quality improvement initiatives, TQM as a strategic resource remains virtually unexamined in strategic management research. As Roberts and Sergesketter (1993) point out, the foundation of TQM is the scientific method, including systems, methods, and tools. But, they continue, "TQM goes beyond specific improvements, however desirable these may be, to the transformation of organizations and organizational cultures from what they are today to something very different" (p. 3). In the following sections I will outline my recommendations for specific areas of research and how research teams might be formed, and give an example of the type of research design that might be applied.

Areas for research

There are many potential areas for future research related to the ways in which cross functional quality improvement teams might help break down barriers in organizations.

Studies to determine how to effectively overcome resistance to change on the part of an organization's managers might also provide important insights into organizational transformation efforts. The senior managers of organizations have no difficulty in understanding the need for changing the culture of their organizations. What they are less likely to recognize is the need for personal change. O'Toole (1995) describes organizational culture as a complex, interrelated whole of behaviors that characterize the organization. Since the leaders of an organization are an integral part of that culture, they must undergo personal change in order to achieve a change in the organization's culture.

Thus to talk about a culture as "it" is absurd: culture is "us." To talk about top management's role in changing corporate culture is to talk about people changing *themselves*, not changing some "it" or "them" outside the door to the executive suite [italics in original]. (p. 72)

Formation of research teams

I also suggest that researchers from a variety of disciplines be enrolled in studies of how such "transformations" can be accomplished. Statisticians currently occupy a prominent position in the "TQM brain trust." After all, W. Edwards Deming, the *master*, was a statistician. And statisticians are naturally attracted to a field like TQM where their skills can be readily applied in very meaningful ways to real world situations. Deming himself recognized the importance of the knowledge to be gained from other disciplines. He spoke, for example, of the need to apply philosophical thought and frequently referred to the book Mind and The World Order: Outline of a Theory of Knowledge (Lewis, 1929).

Transforming organization cultures involves overcoming resistance to change. Social psychologists have valuable insights, based on extensive research, on how attitudes are formed and how attitudes can be changed. In the *research designs* section of this chapter, I will suggest how some of the models for attitude change that have been developed by social psychologists might be applied to organizational change. Educators can also play an important role in overcoming resistance to change by helping senior managers develop critical

thinking skills. Highly developed critical thinking skills enable leaders to identify and challenge "taken-for-granted" assumptions that block consideration of new approaches and new behaviors.

Academically trained marriage and family therapists can also bring a valuable perspective to the issue of organizational change. The foundation of marriage and family therapist training is systems theory. Such therapists examine human relationships and patterns of behavior and the ways in which these relationships and behaviors influence one another. The work of marriage and family therapists is to listen, observe, assess, collaborate, facilitate, and intervene to bring about change. These skills can be applied directly to organizational settings.

My basic orientation is to be inclusive rather than exclusive. Studies conducted by consultants could, for example, be extremely valuable. This point is illustrated by Steier (1985). While Steier is addressing family therapy research, the concepts apply equally to research in organizations. "Good interveners are always good researchers," Steier contends, "in the sense that they create their therapy in part by reflecting on which interventions were successful and which were not." And, as Steier also notes, the inverse is true. "Researchers may also be interveners, as the very act of asking a family questions admits the possibility of changing the perspective and/or behavior of that family" (p. 34).

Research designs

I recommend that longitudinal studies be undertaken using an experimental research paradigm. Specifically, I recommend research designs that would determine the effectiveness of the five most widely researched models used to study attitude formation and attitude change: social judgment theory, information-integration models, cognitive dissonance theory, theory of reasoned action, and elaboration likelihood model (O'Keefe, 1990).

To illustrate how these models might be applied, I will use cognitive dissonance theory as an example. One of the areas of interest in cognitive dissonance theory is what is referred to as "forced compliance." Forced compliance occurs when an individual is induced (not

actually forced) to act in a way that is discrepant with his or her beliefs and attitudes. Dissonance theory suggests that the amount of dissonance experienced in a forced compliance situation depends on the amount of "incentive" offered to the individual to engage in the discrepant action. The greatest dissonance occurs when the incentive is only just enough to induce the compliance. Very large incentives produce relatively little dissonance.

There are a variety of ways in which forced compliance situations can be established in organizations. To create dissonance, for example, the organization's managers might be asked to make presentations to small groups of employees, explaining their vision for the organization and what changes they personally are making to move the organization toward realization of that vision. Or they might be asked to lead discussion groups dealing with personal change and commitment. Research has indicated that "choice" on the part of the individual is a necessary condition of forced compliance attitude change. In the preceding scenario, this choice might be achieved by providing individuals with choices of topics to discuss or choices regarding the type of forum in which they would participate.

There are a host of research design issues that are beyond the scope of this report. My intent is simply to illustrate the type of intervention that could be used in an experimental design paradigm. I do recommend that both quantitative and qualitative research methods be employed. Further, I suggest that several different methods of data collection and analyses be utilized regardless of the overall research design. Data collection, for example, might include observations, interviews, surveys, questionnaires, and a variety of validated instruments to measure attitudes and beliefs. I have included comments on the limitations of the methodology used in this study in Appendix A.

Summary

There are many potential areas for research related to organizational improvement and TQM in particular. Further research into the ways in which cross functional quality improvement teams might help break down barriers in organizations should be considered. Furthermore, gaining an understanding of how to overcome resistance to change on the part

of an organization's managers also appears to offer the opportunity to acquire unique knowledge that could be extremely valuable to both academia and the business community. To maximize the likelihood that valid and relevant information is developed, I recommend that teams of researchers from a variety of disciplines be enrolled in studies of how organizational transformations might best be accomplished. Longitudinal studies using an experimental research paradigm should be utilized whenever possible. Using models such as those developed by social psychologists to study attitude change as the basis for the investigations would help to ground the findings in well established theory and research.

EPILOGUE: A CLOSING NOTE

At the beginning of this report I informed my readers that I was a proponent of Total Quality Management. After reading about the results of the Carter Company's TQM implementation, you may be asking yourself this question: "Is this guy still a believer?" The answer: "You bet!" The problem in this situation was not the TQM; the problem was timing. I will illustrate my point by means of a parable.

A middle aged man has a severe heart attack. Fortunately his family is able to get him to a nearby hospital in less than an hour. He is met in the emergency room by the hospital administrator. The administrator tells the man how fortunate he is to have come to this particular hospital. They have the very best rehabilitation program in the city. He explains to the man that rehabilitation is a long term process. He tells the man that to restore his health he must make a commitment to work with the hospital's dietitian and physical therapist to reduce his cholesterol level and improve his cardiovascular system. In the meantime no one performs an EKG, administers blood thinners or does anything to mitigate the man's immediate problem. The man dies.

Does this mean that physical therapists and dietitians are not important in the treatment of patients who have suffered heart attacks? No. But first the patient's immediate problem must be dealt with. How does that relate to TQM? Consider the following scenario.

A company is in financial difficulty. Sales are declining and the company is losing money. The creditors are closing in. The company contacts a TQM provider. The director of the TQM organization tells the company how fortunate they are to have come to this particular TQM provider. They have the very best implementation program in the business. He explains to the company that TQM is a long term process. He tells them that in order to achieve success that they must make a commitment to utilize the TQM provider's experts to train all of the people in the organization about TQM concepts and tools. They must then form cross functional quality improvement teams to study and improve the company's processes. In the

meantime no one asks about the financial health of the company or conducts any diagnostics on the core problems facing the organization. The company fails.

Does this mean that TQM cannot help companies improve? No. But the corrective action plan must be appropriate for the situation. The company in this scenario needed to focus all of their resources on their core problem. After that is resolved they can begin the long term improvement program. We read in Ecclesiastes that "There is an appointed time for everything and a time for every affair under the heavens" (3:1). Similarly there is an appropriate time for implementing a company-wide TQM initiative. And the time for that is not in the midst of a crisis.

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APPENDIX A: METHODOLOGY

This section begins by answering the questions, "Why a case study?" and "Why qualitative research?" I then describe the way in which I collected the evidence. The concluding section of this appendix addresses the limitations of this study.

Why a case study?

An article in Industry Week recently made the assertion that "In 10 short years, TQM has become as pervasive a part of business thinking as quarterly financial results" (Benson, 1993, p. 48). Yet, as Powell (1995) points out, "TQM's role as a strategic resource remains virtually unexamined in strategic management research" (p. 15). Articles and books about TQM abound in the business press. Most of what has been written about TQM can be categorized into three groupings. The most pervasive of these writings are "prescriptive," explaining the philosophies and concepts underlying TQM, then outlining implementation methodologies. The second grouping includes the myriad of books and articles offering anecdotal evidence of the effectiveness of TQM. The final grouping includes those studies that are based on empirical findings about the results of TQM initiatives.

Empirical studies about TQM are rare and typically utilize large scale, post hoc surveys. The absence of meaningful "control" and the innumerable extraneous variables that are involved raise serious questions about the validity of these findings. Another problem with large scale survey data is that the results are presented at such a high level of abstraction that they have little practical meaning to managers operating in the real world. "The overall patterns that are so plain from on high may, like Martian canals, disappear when one is on the ground" (Bell, 1994, p. 395).

When I was planning this research, one of my primary objectives was to design a study that would add to fundamental knowledge, while at the same time provide meaningful information to TQM practitioners. Since the TQM umbrella covers a multitude of topical areas, my first challenge was to select an area of interest to TQM practitioners and one in which I had both interest and experience. I chose to study the use of cross functional quality

improvement teams as an element of a Total Quality Management initiative. The next issue was that of the most appropriate research design for my intended purpose. I chose a case study approach. Yin (1989) contends that case studies are the preferred strategy "when the investigator has little control over events" (p. 13). Another advantage of case studies is that they allow researchers to "deal with the reality behind appearances, with the contradictions . . . of social life, as well as with a whole that is more than the sum of the parts" (Feagin, Orum, & Sjoberg, 1991, p. 39). Admittedly, there are limitations to single case studies. As Mitchell (1983) points out, "the single case becomes significant only when set against the accumulated experience and knowledge that the analyst brings to it" (p. 203). Mitchell contends that case studies are heuristic; that they "reflect in the events portrayed features which may be construed as a manifestation of some general abstract theoretical principle" (p. 192). Similarly, Ragin and Becker (1992) point out that, "a 'case' implies a family; it alleges that the particular is a case of something else" (p. 121), and that researchers seldom "claim that their work deals only with a particular circumstance" (p. 122). The most important aspect of drawing a generalization from a single case is that the judgment as to the *range of generalization* should not be made by the evaluator. Instead, "it should be made by those individuals who wish to apply the evaluation findings to their own situation" (Kennedy, 1979, p. 672). This requires that the researcher be specific in the description of the attributes of the case. I will have more to say about this "applicability" issue in the following section.

Why qualitative research?

Qualitative methodology provides an ideal approach for the study of complex systemic changes in organizations. Furthermore, qualitative studies "are especially well suited to finding causal relationships" (Denzin & Lincoln, 1994, p. 434). The most important quality criterion for a naturalistic inquiry is *relevance*. The *rigor* of qualitative research methodology is referred to as *trustworthiness*. Before addressing the aspects of trustworthiness, it may be helpful to address four issues that are central to all research paradigms and methodologies. (Guba, 1981).

- *Truth value.* How can one have confidence in the findings presented?
- *Applicability.* How can one determine the applicability of the findings to other contexts?
- *Consistency.* How can one determine if the findings would be consistently repeated with similar contexts and participants?
- *Neutrality.* How can one determine if the findings are solely a function of the participants and conditions of the study?

The entries in Table 6 illustrate the differences in how quantitative and qualitative researchers respond to the preceding questions.

Table 6. Aspects of trustworthiness

Aspect	Quantitative Research Paradigm	Qualitative Research Paradigm
Truth Value	Internal Validity	Credibility
Applicability	External Validity	Transferability
Consistency	Reliability	Dependability
Neutrality	Objectivity	Confirmability

Credibility relates to how well the realities represented by the researcher match with the constructed realities of the participants. Transferability requires that the researcher carefully document the context of the study to allow others to determine the *fittingness* to other contexts. Dependability deals with research stability and consistency. Confirmability seeks to establish that the data are rooted in the perceptions of participants.

Collecting the evidence

My primary method of collecting data was by interviewing. I used both individual and group interviews. The degree of structure and specificity for the interviews varied by the category of participant and phase of the investigation. All of the interviews were recorded

and transcribed verbatim. I also reviewed a variety of relevant documentation: general information about the Carter Company's origins and specific information related to the two teams that I investigated. I had planned to observe meetings between active cross functional quality improvement teams and the Carter Company's steering committee. Unfortunately there were no such meetings after I began my study.

The pilot study

My first step in the investigation of the Carter Company's experiences was to conduct a pilot study. This pilot study consisted of a group interview with members of another cross functional quality improvement team in the Home Plant. I did not conduct follow up interviews with any of the members of this team. I had two objectives in conducting the pilot study. First, I wanted to gain experience in the process of interviewing. Secondly, I wanted to evaluate the results of the pilot study before finalizing the research methodology.

One of the issues I had not resolved prior to the pilot study was whether to include the team leader in the group interviews with the other team members or to interview them separately. I decided to include the team leader in the pilot group interview and then evaluate how the leader's presence influenced the interview process. After this interview, I decided that having the team leaders present when I conducted the group interviews with the Good Waste and Job Ticket teams would be a mistake. It became obvious that the presence of the pilot study team leader inhibited the dialogue; other members were reluctant to discuss negative aspects of the team meetings. One of the more outspoken team members made several attempts to get others to talk about the difficulties they experienced working as a team and the need for attention to process. "Our emphasis was on data collection and mathematics," she explained. "I think the people issue is important too." In spite of this team member's repeated attempts to surface the "process" issue and my efforts to probe, other members remained silent on this topic.

The pilot study also helped me avoid an ungraceful situation regarding the presence of team sponsors when I later interviewed the Good Waste and Job Ticket teams. It had not

even occurred to me that the team sponsors would consider themselves members of the team. Yet, when I arrived for the group interview with the pilot study team, the team sponsor was present. Clearly it would have been awkward to ask the team sponsor to leave. For the main study, however, I was able to advise the team leaders and team sponsors that I wanted to gain their respective perspectives, then meet separately with the other team members as a group.

The main study

Since my primary method of collecting evidence was by interviewing, I will elaborate briefly on the approach I used in this investigation. An overview of the sequence of my interviews with individuals and groups is shown in Figure 4.

I interviewed most of the participants twice. The primary purpose of my second round of interviews with members of the Good Waste and Job Ticket teams was to corroborate my interpretation of what the participants related during the first session. Following my group interviews with the team members, I wrote summaries of these sessions and sent them to each member for their review. I then conducted individual interviews with each member to verify my understanding and to explore areas that may not have been discussed in the group interview. My second interview with other participants was primarily to give them a chance to bring up subjects that they may have overlooked during our initial interview and to provide me the opportunity to delve into issues that I had learned about from others since our first interview.

My first step in all of the interviews was to take some time to establish rapport, mutual understanding, and trust. I provided information about my background and interests, and asked participants to tell me about themselves and their role in the organization. I assured each participant that they could be assured of confidentiality and anonymity. After establishing rapport, I explained that I had a general interest in learning about the experiences of members of cross functional quality improvement teams. I also advised the participants that I was curious about whether team members viewed the organization differently after

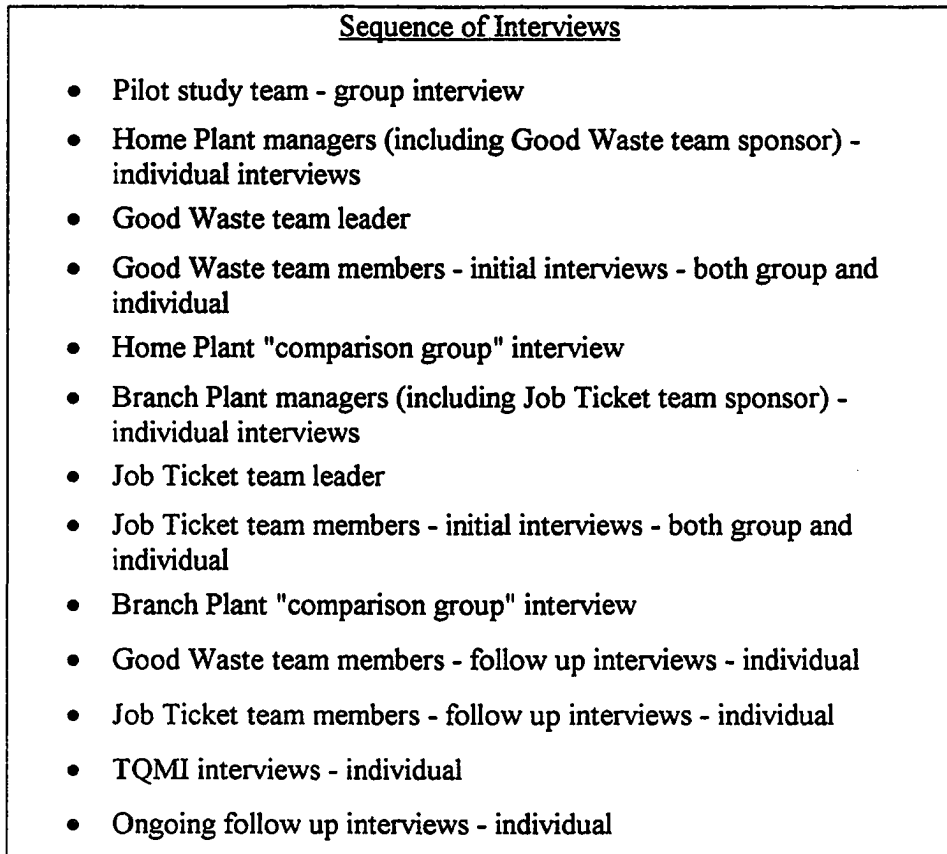


Figure 4. Sequence of interviews

being involved on a team. Finally, I emphasized that my objective was to learn and that the session would be unstructured.

My lead-in question for all of the interviews was of "grand tour" type. For members of the teams that I investigated, this was some variation of asking what it was like to be a member of that team. For managers, the grand tour question was generally "Tell me about the Carter Company." In all of the interviews, my objective was to obtain as much information as possible by relying on what McCracken (1988) refers to as "floating prompts." I also

prepared a structured sequential line of questioning for each interview, using the "planned prompt" approach recommended by McCracken.

Throughout the course of the investigation, my research methodology had to be adapted to accommodate the changing conditions in the Carter Company. I will illustrate the influence of these changes by providing some specific detail about how I actually collected data regarding the two teams.

The Good Waste team

I began collecting information about the Good Waste team during my interviews with the Carter Company Home Plant management. The most important of these interviews was with Frank Simms, the Home Plant production manager, who was the management sponsor of the team.

As originally planned, I interviewed Randy Shepard, the team leader, on an individual basis. I had then planned to interview all of the other team members as a group, but only Bonnie Olson, George Kessler, and Edward Bowles were available at the appointed time. I was able to interview Peggy Lynch later that day, and Earl Jensen several weeks later. Fred Perkins had left the Carter Company by the time I conducted the group interviews, but I had interviewed him earlier on an individual basis.

After completing the group interview with Olson, Kessler, and Bowles, I analyzed the comments, wrote a comprehensive summary, and mailed a copy to each of them. I had planned to return to the Home Plant for follow up interviews. Shortly after my first visit, Harold Miller announced that the plant was to be closed and asked that I not conduct any further interviews at that plant. Fortunately, the team members were willing to talk with me by phone from their homes so I was able to complete the planned follow up interviews.

I was very fortunate to have completed all of the initial interviews in the Home Plant before it was closed. I am also grateful that the Home Plant employees were willing to review my written summaries of the initial interview sessions and talk with me about these, even though they were no longer employed by the Carter Company.

The Job Ticket team

I began collecting information about the Job Ticket team during my interviews with the Branch Plant management. The most important of these interviews was with Marshall Ingram, the Branch Plant production manager, who was the management sponsor of the team. I also interviewed Erwin Hatch at that time since he was by then considered part of management.

My interviews with the Job Ticket team members lagged the Good Waste team interviews by almost two months. As originally planned, I interviewed Karen Jones, the team leader, on an individual basis. I also interviewed Don Hines on an individual basis since he worked a different shift than the other members. I had then planned to interview the remaining five members as a group. Unfortunately, Ron Brewer and Larry Spencer were not available on the appointed day; they were not working that day because there was nothing to do in their departments. My first group interview was with Gerald Myers, Raymond Gossett, and Mary Speas. I returned at a later date to interview Brewer and Spencer.

After completing the group interviews, I analyzed the comments, wrote comprehensive summaries of both interviews, and mailed a copy of the respective write-ups to each of the participants. I then scheduled follow up interviews with each of these participants. I was able to conduct four of these in person. The day preceding my return for these follow up interviews, however, Mary Speas was terminated as part of a general layoff at the Branch Plant. This had a "chilling effect" on the other interviews since the other members of the team had a great deal of respect for Mary's capability. I also learned that Gerald Mead had been transferred to a different job, at 30 percent lower pay. I was able to conduct a follow up interview with Speas by phone.

Changes during the course of the study

The data that emerged during the course of the study caused me to shift the focus of my investigation. My initial objective was to investigate the ways in which cross functional quality improvement teams might serve to break down organizational barriers. While that

continued to be an area of interest, my primary focus shifted to what had gone wrong with the TQM implementation at the Carter Company. Before I had completed the initial interviews, I made the following observation in my diary.

At this point, the issue of interdepartmental conflict does not seem to be a major item with the Carter Company. The company is in dire straits and the organization has not derived any benefit from the time and expense invested in their TQM initiative. The real issue is "How did the Carter Company get into their current difficulty, and why didn't TQM help them?" If anything, it seems that TQM has actually worsened the situation.

After communicating this change in focus to my dissertation committee, I began to ask participants at all levels of the company's hierarchy the following sequence of questions:

"Why was TQM started at the Carter Company?"

"Was that of interest to you?"

"Did it work out that way?"

"What would it have taken to make TQM work at the Carter Company?"

Analyzing the verbal data

The first step in the analysis process was to listen to the recorded interviews and read the transcriptions. As I began to visualize patterns or categories of subject matter, I marked specific sections of the transcripts for further analysis. As the investigation evolved, I began to assign analytical categories to quotations pertaining to these categories. This was an ongoing process throughout the investigation and analysis phases of this study. The categories were ultimately grouped into domains of information. More than 1000 quotations were selected for further analysis.

The coding system

I developed a coding system to identify each of the selected quotes by analytical category, specific transcript, and page number in that transcript. This enabled me to refer back to the original transcript to refresh my memory on the particular context in which the

statement was made. As the analysis evolved, I sorted the quotations by analytical category and by participant classification, for example Good Waste team members, "contrast" group members, production managers, and so on. This was very helpful in gaining an understanding of the different perspectives of the various constituencies in the Carter Company.

Personal introspection

Personal introspection regarding the meaning of the evolving data was an essential part of this analysis. Recording these *personal perspectives* provided the insights necessary to begin the process of understanding the underlying meaning of the participants' comments.

Trustworthiness of the study

Member checks were an ongoing part of this investigation and were key to establishing credibility. Team members were provided with written summaries of the initial interview sessions. The review of these summaries was an integral part of the follow up interviews. Triangulation data was obtained from the different categories of participant type: team leaders, team sponsors, team members, contrast groups, and various levels of management.

Transferability has been addressed by providing a *thick description* of the context of this study. Readers can determine whether the relationships and linkages described in this study will be useful in other organizational contexts. This thick description emerged from the verbatim transcripts of the interviews, my observations during the course of the study, and the broad range of participant sources.

Dependability has been addressed by the careful organization and documentation of the *process* of the investigation, and by providing an *audit trail*. The sources of data for this audit trail include the transcriptions of both the initial and follow up interviews, my notes and personal perspectives resulting from the investigation, the data reduction and analysis work papers, notes from peer reviews, and this report itself.

Triangulation, as noted in the first paragraph of this section provided confirmability of the data. Peer debriefing also served to insure confirmability.

Limitations of the study

Some of the methodological issues which may limit the transferability of this study are:

1. Only qualitative data were gathered and examined.
2. The data collection was essentially limited to interviews. I had intended to observe cross functional quality improvement team meetings being facilitated by TQMI and meetings between these teams and the steering committee, to corroborate the perceptions of the participants. I was unable to make these observations because of the changes that occurred in the Carter Company during the time that I was conducting the study.
3. All of interviews were conducted by the same researcher. My values and beliefs may have biased my perspectives.
4. The investigation was post hoc.
5. The layoffs and plant closures that occurred during the investigation were major confounding variables.
6. The investigation was limited to a single organization.

APPENDIX B: TQM DEFINED

In the Introduction section of this report, I explained that there is no universally accepted definition of Total Quality Management. One of the most contemporary and comprehensive definitions is provided by Roberts and Sergesketter (1993).

TQM is a people-focused management system that aims at continual increase of customer satisfaction at continually lower real cost. This is a total system approach (not a separate area or program), and an integral part of high-level strategy; it works horizontally across functions and departments, involves all employees, top to bottom, and extends backward and forward to include the supply chain and the customer chain. TQM stresses learning and adaptation to continual change as keys to organizational success.

The foundation of TQM is philosophical: the scientific method. It includes systems, methods, and tools. The systems permit change; the philosophy stays the same. TQM is anchored in values that stress the dignity of the individual and the power of community action.

TQM is in one sense a highly democratic system, but it requires dedicated and informed leadership from senior management, leadership that is aware of the obstacles to successful implementation. TQM goes beyond specific improvements, however desirable these may be, to the transformation of organizations and organizational cultures from what they are today to something very different. (pp. 2-3)

According to Becker, Golomski, and Lory (1994), this definition was arrived at by consensus during a Procter & Gamble sponsored conference in 1992. Furthermore, Becker et al. (1994) reported that "the consensus was endorsed by the chairs and chief executive officers of nine major U.S. corporations, deans and professors of major universities, and eminent consultants in TQM methods and principles" (pp. 18-19).

A somewhat shorter definition is offered by Capezio & Morehouse (1993):

Total Quality Management refers to a management process and set of disciplines that are coordinated to ensure that the organization consistently meets and exceeds

customer requirements. TQM engages all divisions, departments and levels of the organization. Top management organizes all of its strategy and operations around customer needs and develops a culture with high employee participation. TQM companies are focused on the systematic management of data in all processes and practices to eliminate waste and pursue continuous improvement. (p. 1)

The criteria for the Malcolm Baldrige National Quality Award (Malcolm Baldrige, 1996) do not define TQM, but they do provide some valuable perspectives on what are judged to be "the requirements for [organizational] performance excellence and competitiveness improvement" (p. 1). Brian Joiner, a consultant and a Baldrige judge explains that "the award does not tell you what to do. It helps you to assess how well you're doing" (Dobyns & Crawford-Mason, 1991, p. 177). The Baldrige Award criteria are depicted in a framework having three basic elements: driver, system, and goal.

Driver

Senior executive leadership sets directions, creates values, goals, expectations, and systems, and pursues customer and business performance excellence.

System

The system comprises the set of well-defined and well-designed processes for meeting the company's customer and overall performance requirements.

Goal

The basic aims of leadership and the purposes of the system are two-fold:

Customer and Marketplace Performance

Customer and marketplace performance means delivery of ever-improving value to customers, high levels of customer satisfaction, and a strong competitive position.

Business Performance

Business performance is reflected in a wide variety of financial and non-financial results, including human resource development and corporate responsibility. (p. 33)

The following definitions provide some additional perspective about what is generally included under the TQM umbrella. These definitions were all taken from the July 1995 issue of Quality Progress, a monthly publication of the American Society for Quality Control. All 13 of the papers in this particular issue either defended or attacked TQM. The call for papers specified that each include a definition of TQM. Only one of the papers accepted for publication did not comply with that requirement. The author of that paper explained that his company, a Baldrige Award winning organization, had decided that the term TQM, along with similar phrases, had actually hindered the progress in their improvement efforts (Landes, 1995, p. 44). In the introductory article for this issue, the associate editor stated that these definitions "are just food for thought. Quality Progress does not endorse one definition over another" (p. 28). With that as a caveat, these are the verbatim definitions offered by each author.

- TQM is a business philosophy that seeks to improve the results, including financial performance, of an organization's management system; guarantee its long-term survival through a consistent focus on improving customer satisfaction; and meet the needs of all of its stakeholders: customers, employees, owners, and suppliers. (Dobbins, 1995, p. 32)
- TQM is a strategic architecture requiring evaluation and refinement of continuous improvement practices in all areas of a business. (Roosevelt, 1995, p. 35)
- TQM is the processes, methods, and systems that organizations use to delight customers, and, at the same time, help reduce costs, increase revenue, and empower employees. These methods are not fixed in stone; they grow and develop with time. Recent additions include customer loyalty analysis, customer-supplier partnerships, reengineering, and self-directed work teams. (Early & Godfrey, 1995, p. 52)
- TQM is the continuous improvement of all activities. It is a methodology as well as a well as a way of life. It encompasses such tools and techniques as statistical process control, goal alignment, and failure mode effects analysis, while channeling

the mind-set of every employee to achieve continuous improvement. (Rau, 1995, p. 57)

- TQM is a management philosophy that builds a customer-driven, learning organization dedicated to total customer satisfaction through continuous improvement in the effectiveness and efficiency of the organization and its processes. (Corrigan, 1995, p. 61)
- TQM is: customer focus, teamwork, improvement, mission driven. (Moe, 1995, p. 70)
- TQM is responsive customer service through continuously improved and redesigned work processes. (Buch & Shelnut, 1995, p. 73)
- TQM is all employees working together in a systematic way to make improvements for customers. (Feinberg, 1995, p. 80)
- TQM is a customer-focused management process of continuous improvement that utilizes employee involvement and the appropriate application of the technical tools of quality. (Hoover, 1995, p. 84)
- TQM is setting targets for improvement, developing a yardstick for measuring improvement, formulating and implementing actions to achieve improvement, and checking the yardstick to see whether the actions worked (i.e., the plan-do-check-act cycle). (Bohan, 1995, p. 91)
- TQM is the application of quantitative methods and the knowledge of people to assess and improve (a) materials and services supplied to the organization, (b) all significant processes within the organization, and (c) meeting the needs of the end user, now and in the future. (Ryan, 1995, p. 95)
- TQM is a philosophy and set of concepts and methods employed throughout an organization by individuals with a view toward continually improving the product or service provided to customers. (Walker, 1995, p. 103)

Again, these definitions were all taken from the July 1995 edition of Quality Progress.

The November edition of Quality Progress contained an interesting commentary from a

reader. Potocki (1995) stated that the great variance in these definitions imply that TQM is still an emerging concept. He concluded, however, that there were five main TQM elements conveyed in the 12 definitions: continuous improvement practices, customer satisfaction, employee involvement, measurable improvement results, and leadership. Of these, the two elements most frequently stated were continuous improvement practices and customer satisfaction. Of relevance to this study is that leadership is mentioned in only one of the twelve definitions. Yet, as Potocki observed, "leadership is the most cited cause for the lack of success in TQM implementation" (p. 14).