The Role of Organizational Culture in Promoting the Success of TQM Implementation

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INTRODUCTION

Local governments are facing a formidable array of challenges (Glaser 1993) and many local governments are "nearing a state of fiscal and service delivery crisis" (Marlowe and Nyhan 1993, 1). Moreover, productivity growth rate in local governments is declining (Marlowe and Nyhan 1993), funds are diminishing (Whitten 1989), thousands of employees have been laid off (Osborne and Gaebler 1992), and citizens are demanding more services with less taxes (Mali 1990). According to Mali (1990), 71 percent of cities who responded to a survey (n=20) reported that citizens are demanding more government services, but with lower taxes. Further, citizens confidence in government is extremely low (Newell 1988; OPM 1992; and Osborne and Gaebler 1992). Over 60 percent of Americans voters believe that most of their taxes is wasted by government (OPM 1992). In 1992, only 14 percent of the American people had a great deal of confidence in government (OPM 1992), and only 5 percent of American surveyed indicate that they would choose government as their preferred career (Osborne and Gaebler 1992). In brief, government "needs fixing" (Walters 1992).

To cope with the challenges they are facing, a large number of local governments have implemented TQM and many have documented positive results (Box, Joiner, Rohan, and Sensenbrenner 1991; Brown 1992; Buckwalter, Chesnut, and Parsons 1993; Carlisle 1990; Contino and Giuliano 1991; Galloway 1992; Luther 1993; Pfister and Wart 1993; Ream 1992; Sarno, Kolak, and Moore 1990; Stewart 1988; and, Walters 1992). Governments that have implemented TQM effectivelly have experienced reduced waste and overall cost of quality (Becker, Golomski, and Lory 1994; Buckwalter, Chesnut, and Parsons 1993; and Ritter 1991); increased employee morale (Moore 1990); reduced absenteeism (Moore 1990); improved organizational effectiveness (Buckwalter, Chesnut, and Parsons 1993; and Walters 1992); improved productivity (Becker, Golomski, and Lory 1994; Carlisle 1990; and Mead, Rasmussen, and Seal 1986); improved employee sensitivity to customers--citizens--(Carlisle 1990); and major annual savings (Brown and DeCrease 1991; and Moore 1990).

Unfortunately, organizations that have achieved positive results from TQM are in the minority. The majority have not obtained the hoped-for results. Failure has been common (Eskildson 1994; Goodman, Bargatze, and Grimm 1994; Harari 1993a, 1993b; Merron 1994; Sherwood and Hoylman 1993; Steele 1993; Walker 1992; and, Walters 1992). Titles such as: "When TQM Goes Nowhere"; "Ten Reasons Why TQM Doesn't Work"; "10 Reasons Why Total Quality Is Less Than Total"; "Why Does Total Quality Fail in Two Out of Three Tries"; and "Why TQM Fails and What To Do About It" are becoming common in journals.

The current trend of TQM implementation raises the question of why some organizations fail at TQM while others succeed? Identification of factors that cause TQM to fail or succeed are critical if the benefits that TQM promises are to be realized. Yet, very little empirical research has been done to identify the organizational and behavioral preconditions required for effective TQM implementation. Therefore, the purpose of this study is to investigate the role of

organizational culture in impeding or promoting the implementation of TQM in small US cities.

Total Quality Management

TQM is defined as "fitness for use" (Juran 1989); "conformance to requirements" (Crosby 1979, 1984); "meeting the customer's needs and expectation, present and future" (Deming 1986); "a way to continuously improve performance at every level of operation, in every functional area of an organization, using all available human and capital resources" (Brocka and Brocka 1992, 3); "a philosophy that focuses attention on customers' wants, a set of techniques that are needed to institutionalize a system, and a leadership necessary to keep the organization operating according to the philosophy of customer service" (Kramer 1993, 16); "an organizational strategy and accompanying techniques that result in the delivery of high-quality products and/or services to customers" (Lee, Luthans, and Hodgetts 1992, 44); "everything of value to a public service organization and the end users of its services... [and] a set of principles, tools, and procedures that provide guidance in the practical aspects of ensuring quality in services" (Keehley 1992b, 10-11); "meeting the agreed requirements of the internal and external customers now and in the future" (Robson 1989, 71); "a set of concepts and tools for getting all employees focused on continuous improvement, in the eyes of the customer" (Schonberger 1992, 17); "knowing your customer, both internally and externally" (Powell 1989, 44); "a total commitment to a customer-oriented and customer-satisfaction culture" (Hensler 1994, 166); and "organizational equivalent of truth" (Harrison and Stupak 1993, 11). This study adopts the definition used by the GAO is adopted because it accentuates the commonly agreed-upon primary elements of TQM. GAO (1991b, 41-42) defines quality management as:

> A leadership philosophy that demands a relentless pursuit of quality and the stamina for continuous improvement in all aspects of operations: product, service, processes, and communications. The major components of quality management are leadership, a customer focus, continuous improvement, employee empowerment, and management by fact.

Organizational Culture

Harrison and Stokes define organizational culture as "the pattern of beliefs, values, rituals, myths, and sentiments shared by members of an organization" (Harrison and Stokes 1992, 1). It is "made up of those aspects of the organization that give it a particular climate or feel. Culture is to an organization what personality is to an individual. It is that distinctive constellation of beliefs, values, work styles, and relationships that distinguish one organization from another" (Harrison and Stokes 1992, 13). They distinguish between different types of culture: (1) power; (2) role; (3) achievement; and (4) support. Table 1 summarizes the main characteristics of these four types of organizational culture. This study adopts Harrison and Stokes' (1992) definition of organizational culture which is commonly adopted in the literature (Atkinson 1990; Cartwright and Cooper 1993; and Hebden 1986).

Table 1
Types of organizational culture

Type	Characteristics
POWER	Leadership is based on strength.
	Motivation is based on rewards and punishments.
	Decisions are made by the leader.
	Autocratic and hierarchical form of organization.
	Minimum attention is given to the customer.
ROLE	Bureaucratic and hierarchical form of organization.
	Employees are motivated by extrinsic rewards (Theory X).
	Heavy reliance on rules and regulations.
	Employee participation is limited. Impersonal procedures.
	What people do is more important than the people.
ACHIEVEMENT	Mission-driven organizations.
	Employees are motivated by the achievement of goals.
	Emphasis on teams' commitment to achieve goals.
	High level of participation in a pursuit of the goals.
	Underorganized.
SUPPORT	Mutual trust between the individual and the organization.
	People believe that they are valued as human beings.
	Highly motivated employees.
	High level of cooperation between members.
	People are assumed to work and contribute (Theory Y).

Source: Developed by the author based on Atkinson's (1990); Cartwright and Cooper's (1993); Harrison and Stokes' (1992); and Hebden's (1986) descriptions of the four types of orgizanication culture.

TQM & Organizational Culture

It is essential for any organization attempting to implement TQM to transfer from the existing culture to a quality culture where the primary value is improving quality in a continuous basis. Otherwise, the TQM initiative will not deliver the hoped-for results due to the fact that employees will revert to the old ways of doing things, and the efforts to improve quality and

productivity would, therefore, be wasted. Kravchuk and Leighton (1993) investigated the role of organizational culture and leadership in determining the success of TQM implementation in state government. They concluded that "successful implementation of TQM in state government is contingent on strong managerial leadership and receptive administrative culture" (Kravchuck and Leighton 1993, 71). Similarly, Brown and Alan (1992) investigated TQM initiatives in Western Australian organizations and concluded that developing a quality culture was a critical component of these initiatives. The link between organizational culture and TQM is being realized and gaining great attention in recent years (Atkinson 1990; and Pindur, Kim, Reynolds 1993). "In 1986, ASQC surveyed 600 managers across the country asking the importance of several contributing factors in developing quality. Ten percent responded that organizational culture was the most important ingredient contributing to quality. In 1988, they performed a similar study of 600 different managers. This time, 40 percent replied that organizational culture was the most important component producing quality" (Covey and Gulledge 1992, 70).

According to the organizational culture concept, if TQM initiatives are to be successful, organizations must establish a quality culture that highly values teamwork (Atkinson 1990; and Vinzant and Vinzant 1993); employee involvement, participation and empowerment (Carr and Littman 1993; Robson 1993; and Sirota, Usilaner, and Weber 1994); open communication (Johnson 1993b); organizational democracy (Hurwitz 1992); cooperation rather than competition (Sashkin and Kiser 1993; and Ubling 1994); risk taking, learning, and creative thinking (Cocheu 1993); preventing errors, mistakes, and defects rather than inspecting for them (Crosby 1979; Juran 1989; and Robson 1988); customer satisfaction (Atkinson 1990; Hagan 1994; and Nordin 1993); and long-term focus on continuous improvement (Carr and Littman 1993; and Hurwitz 1992).

In a quality culture, the organization must have a common vision that is shared by all members of the organization (Carr and Littman 1993; and Weber 1994); view defects and problems as opportunities for improvement (Carr and Littman 1993; and Robson 1988); reward and recognize employees when results are achieved (Sashkin and Kiser 1993); use quality information for improvement rather than judging or controlling people (Hurwitz 1992; and Sirota, Usilaner, and Weber 1994); and must base its decisions on objective data (Carr and Littman 1993). The quality culture must replace the "test and fix," and "if its not broke do not fix it" values with a detect and prevent culture (Robson 1988). The "the way we do things around here" and "cover yourself" values are incompatible with the quality culture and must be replaced with a quality culture that views continuous improvement as essential to the success of the organization and problems as opportunities for improvements.

RESEARCH METHODOLOGY

Respondents and Data Collection

The International City/County Management Association (ICMA), through its Director of Research, Haywood Talcove, provided a listing of all US cities with populations between 50,000 and 125,000 and council-manager forms of government. Of the 242 cities in the US that met these two criteria and that were in the ICMA data base, 142 were contacted in summer and fall 1993 by telephone and 80 by mail to solicit their participation in the study. Twenty cities were not contacted in advance due to erroneous phone numbers and/or incorrect mailing address.

Packets were sent to the 78 cities that agreed to participate in the study and to 20 other cities without advance notice. The packets included a questionnaire to be completed by the city

manager, and a set of 20 questionnaires to be completed by other employees. In total, 98 cities received the packet. After five waves of mailings and telephone calls, complete and usable data were received from 56 cities (23 percent of all council-manager cities in the US with populations between 50,000 and 125,000).

Instrumentation

Two questionnaires were used were used to collect data for this study. The first questionnaire was used to collect data from city managers. The core of this instrument was developed and used by the United States General Accounting Office (GAO) to collect data on TQM implementation in civilian and DoD installations. Minor modifications were made, such as the elimination of questions which relate to the activities and efforts of the FQI. Other items were added to measure such variables as management's perceptions of employee participation. The questionnaire measures the level of TQM implementation based on the implementation of TQM activities. It also asked city managers about the level of TQM implementation success based on their perceptions, and their perceptions of employee participation.

The second questionnaire was used to collect data from employees. It contains portions of instruments which are already in existence and have been used and tested. Without jeopardizing the validity of the original instruments, some modifications were made for the purposes of this study. The questionnaire measures the level of TQM success based on employees' evaluation. It also asked employees about their perceptions of employee participation.

Variables and Measurement

Total Quality Management. To determine the level of TQM success and/or failure, cities were first categorized as (a) did not implement TQM; (b) implemented TQM in all units of the organization; (c) implemented TQM in one unit or more; and (d) implemented TQM but discontinued. For those who implemented TQM (b and c), four indexes of TQM implementation were used. The first three indexes used data collected from city managers and the fourth index used data collected from employees and administrators other than the city manager.

In index 1 of TQM implementation, level of success was based on self-reported TQM activities that had been undertaken by the city. The GAO's (1992) instrument and the criteria for the Presidential Award For Quality were used to calculate the level of success. The Presidential Award For Quality assigns a weight for each element of TQM. In each element there are several activities that collectively determine the extent to which the element has been satisfied. The elements together determine the level of success. The TQM elements, their weights, and the number of activities in each, respectively, are: leadership (20, 11); strategic planning (15, 6); customer focus (35, 4); training and recognition (15, 9); employee empowerment (20, 6); measurement and analysis (15, 5); quality assurance (30, 2); and results (50, 5). The maximum possible points and total number of activities are 200 and 48, respectively.

Since TQM requires several years to reach full implementation and produce ultimate results and most of the cities that responded did not start TQM implementation until 1992 and 1993, 1993 (when the data were collected) is too soon for an evaluation of the success of the TQM programs in many of the surveyed cities. Thus, the step-by-step plan and timetable for implementing total quality that was developed by the Westinghouse Engineering Technology Department, the step-by-step plan and timetable developed by the GAO for implementing TQM(GAO 1991), Fort Lauderdale, FL quality improvement efforts (Moore 1990; and Sarno,

Kolak, and Moore 1990), Juran's (1989, 1992), and Juran and Gryna's (1993) approaches to implementing quality were used to adjust the success measures for "maturity" of the cities' TQM programs. Activities that are not usually undertaken during the first year of TQM program were eliminated from the scoring of cities that implemented TQM in 1993, and activities that are not usually undertaken during the first two years were eliminated from the scoring of cities that implemented TQM in either 1992 or 1993. Alternatively, activities that had been undertaken were not eliminated even if they should not have been initiated until later in the implementation process. Based on the weight, number of activities in each element, and the adjustment for maturity, the scale of TQM was computed to determine the level of success. The sum of the total points for each element determines the level of success using the following scale: above 120 points indicates "a world-class TQM approach"; between 90 and 120 points indicates "a well developed TQM approach"; between 60 and 90 points indicates "a well planned TQM approach"; between 30 and 60 points indicates "the beginning of a sound TQM approach"; and below 30 points indicates "the beginning of TQM awareness" (United States Office of Personnel Management, Federal Quality Institute, 1992).

In index 2 of TQM implementation, level of success was based on the city managers' views of positive results achieved from TQM implementation. Managers were provided with a scale (0 = "very unsuccessful" to 100 = "very successful") and asked to indicate how successful or unsuccessful their cities were in achieving positive results as a result of TQM. To be compatible with TQM Index 1 for comparison purposes, scores were multiplied by 2.

The level of success in index 3 of TQM implementation was based on the city managers' evaluation of the level of TQM implementation. Managers were provided with a scale (0 = "very unsuccessful" to 100 = "very successful") and asked to indicate how successful or unsuccessful their cities were in implementing TQM, regardless of whether they achieved positive results or not. Final scores were multiplied by 2 to render the scale compatible with previous scales of TQM level of implementation.

TQM Index 4 determines the level of success based on employees' evaluations of TQM activities. Ten items from Tagliaferri's (1991) Total Quality Management Survey were selected. These items measure TQM on 8 dimensions: quality processes (1 item); quality results (2 items); human resource utilization (1 item); teamwork (1 item); communication and information (1 item); customer focus (2 items); continuous improvement (1 item); and leadership (1 item). These items are measured in a five-point Likert type scale (1 = "strongly disagree"; 2 = "somewhat disagree"; 3 = "uncertain"; 4 = "somewhat agree"; and 5 = "strongly agree"). The maximum possible points when only the positive responses ("Strongly Agree" and "Somewhat Agree") are considered is 50. The level of success is determined as follows: the sum of the positive points divided by total possible points is multiplied by the total weight (200).

Organizational Culture. To assess the culture of the organization, Harrison and Stokes' (1992) instrument for Diagnosing Organizational Culture, was adopted. The instrument consists of 15 items. For each item, there are four choices representing four types of organizational culture (a = Power, b = Role, c = Achievement, and d = Support). Using the forced-choice method, employees were asked to rank the choices (a, b, c, and d) based on ranking keys (4 = "most dominant, most preferred, and was most dominant" to 1 = "least dominant, least preferred, and was least dominant) three different times. The first time to identify the existing culture (the dominant view); the second time to identify the former culture (the dominant view three years ago) (this variable was added to the original instrument by the researcher); and the

third time to identify the preferred culture (the most preferred alternative).

The existing power-oriented culture score was computed by adding the "a" scores in the existing culture column. The procedure was repeated two times to compute the preferred power-oriented culture score and the former power-oriented culture score. The same procedure was followed with respect to the role-oriented culture, achievement-oriented culture, and support-oriented culture. The existing culture index was computed by adding the "c" and "d" scores in the existing culture column and subtracting the "a" and "b" scores in the same column. The procedure was repeated two times to generate the preferred culture index and the former culture index.

Hypotheses

a) The greater the difference between the existing culture scores and the preferred culture scores, the less likely it is that TQM implementation will be successful.

b) The greater the difference between the existing culture scores and the former culture scores, the more likely it is that TQM implementation will be successful.

c) The more supportive the culture is, the more likely it is that TQM implementation will be successful.

d) The more positive the culture is, the more likely it is that TQM implementation will be successful.

e) Cities with TQM programs are more likely to have supportive organizational culture than cities without TQM.

f) Cities with TQM programs are more likely to have positive organizational culture than cities without TQM.

RESULTS

Responses

Complete and usable data was received from 56 cities (23 percent of all council-manager cities in the U.S. with populations between 50,000 and 125,000). "Complete and usable data" means that a city returned the city manager's questionnaire and at least five complete employees' questionnaires. Any less of a response resulted in the city's data being discarded. The highest response rates were from cities in the south (20 cities, 36 percent), west and north central regions (17 cities each, 30 percent). The lowest response was from the northeast (2 cities, 4 percent).

Hypotheses Testing

H_{b2} *The greater the difference between the existing culture scores and the preferred culture scores, the less likely it is that TQM implementation will succeed.*

The average difference between the existing culture score and the preferred culture score for all the cities that had TQM programs underway was 48.7. This difference was correlated with the four measures of TQM success, and the results yielded a very high and statistically significant correlation ($F = .74$, $p < 0.001$) between the difference between the existing organizational culture and preferred culture and the level of TQM success as measured by employees' evaluations of their TQM programs (TQM Index 4). The results show that the smaller the difference between the existing culture and the preferred culture, the more successful TQM

implementation as perceived by employees. With respect to the other three indexes of TQM success, no statiscally significant relationships were found between them and the difference between the existing organizational culture and the preferred organizational culture. The results support the hypothesis that the greater the difference between the existing culture and the preferred culture, the less likely it is that TQM implementation will be successful as perceived by employees.

H_{b3} *The greater the difference between the existing organizational culture scores and former organizational culture scores, the more likely it is that TQM implementation will succeed.*

For the 26 cities that had implemented TQM, the average difference between the former and existing organizational culture was 7.5. That is a change from the former culture (mean = -21.7) toward the preferred culture (mean = 34.5) by 7.5 points (the mean of the existing organizational culture was -14.2). The difference between the existing and former organizational culture was correlated with the four measures of TQM success. The results yielded a statistically significant and positive correlation ($F = .28$, $p < 0.05$) between the differences and the level of TQM success as measured by the activities that had been undertaken (TQM Index 1). The results show that the greater the difference between the existing culture and the former culture, the more successful TQM implementation was. With respect to the other three indexes of TQM success, no statiscally significant relationships were found between them and the difference between the existing and former organizational culture. The results support the hypothesis that the greater the difference between the existing organizational culture and the former organizational culture, the more likely it is the TQM implementation will be successful as measured by the activities that had been undertaken.

H_{b4} *The more supportive the culture, the more likely it is that TQM implementation will succeed.*

As indicated earlier, the existing culture index was computed by adding the achievement and support scores and subtracting those on the power and role scales. This provides a measure that reflects the general level of empowerment, support, cooperation, and trust within the organization (Harrison and Stokes 1992). The existing culture index was correlated with the four measures of TQM success, and each type of the existing culture was also correlated with the four measures of TQM success (Table 2). The results yielded a statistically significant and positive relationship between the organizational culture and the level of TQM success as evaluated by the employees ($F = .77$, $p < 0.001$) (Table 2). The results presented in Table 2, show that the higher the score in "power", the less successful TQM was based on employee evaluation and on the TQM activities that had been implemented ($F = -.78$, $p < 0.001$, and $R = -.41$, $p < 0.05$, respectively). Similarly, the higher the score in "role", the less successful TQM was based on employee evaluation and the TQM activities that had been undertaken ($F = -.78$, $p < 0.001$, and $F = -.38$, $p < 0.05$, respectively). On the other hand, the higher the score in "support", the more successful TQM implementation was based on employee evaluation ($F = .73$, $p < 0.001$). These findings support the hypothesis that the more supportive the organizational culture, the more likely it is that TQM implementation will be successful.

Table 2
Correlation matrix of organizational culture and the four measures of TQM success

Measures of TQM Success	Existing Organizational Culture				Existing Culture Index
	Power	Role	Achieve-ment	Support	
TQM Index 1 (Based on Activities Undertaken)	-.41*	-.38*	.00	.21	.28
TQM Index 2 (Based on Managers' Perception of Results Achieved)	-.2	-.14	-.21	.04	.11
TQM Index 3 (Based on Managers' Perception of TQM Implementation)	-.1	-.1	-.29	-.2	-.04
TQM Index 4 (Based on Employees' Evaluation of TQM Implementation)	-.78**	-.76**	.23	.73**	.77**

* $p < .05$
** $p < .001$

A multiple regression using the "stepwise" method was applied to test the extent to which variations in organizational culture explain variations in employees' evaluations of TQM implementation. When the existing organizational culture index was entered into the equation, the results yielded a very high and statistically significant relationship between organizational culture and TQM implementation ($R^2 = 49$, Multiple R = .70, F. = 23.2, $p < 0.001$). The multiple regression results show that variations in organizational culture explain 49% of the variations in the level of TQM success as evaluated by the employees. The results demonstrate that cities with successful TQM implementation, as evaluated by the employees, tend to have higher scores on the organizational culture scale more than cities with less successful TQM programs. The line representing organizational culture tends to go up as the TQM score goes up.

Finally, cities that had implemented TQM were grouped into three categories on the basis of the Presidential Award for Quality and employees' evaluation of their TQM implementation efforts. The first group consisted of 6 cities ("World Class TQM Approach"), the second group consisted of 15 cities ("Well Developed TQM Approach"), and the third group consisted of 5 cities ("Well Planned TQM Approach"). The classification was made for further comparison between the three groups with respect to their cultures, the results of which are presented in Table 3. The scores show that the dominant culture in cities with successful TQM programs and cities with less successful TQM programs is role oriented. However, the organizational culture of a city with more successful TQM efforts has more emphasis on support and empowerment and less emphasis on power than in a city with less successful TQM efforts (Table 3).

Table 3
Classification of cities based on level of TQM success and the types of their culture

Categories	Types of Culture				Existing Culture Scale
	Power	Role	Achieve-ment	Support	
World Class TQM Approach	33	**40**	33	33	- 4.5
Well Developed TQM Approach	37	**41**	34	32	- 11.7
Well Planned TQM Approach	45	**46**	30	27	- 33.1

To test the significance of the difference between the three groups with respect to their cultures, a One-Way ANOVA test was applied. The results yielded a very significant difference between the three groups with respect to their existing culture ($R^2 = 7$, $F = 10.9$, $p < 0.001$). The results illustrate the differences between cities with successful TQM implementations and cities with less successful TQM efforts. The demonstrate a positive relationship between organizational culture and the level of TQM success as evaluated by employees. That is, when the score of organizational culture goes up toward support, empowerment, trust, and cooperation, the score of TQM level of implementation goes up as well. Thus, the hypothesis that the more supportive the culture is, the more likely it is that TQM implementation will succeed is accepted.

H_{b5} *The more positve the culture is, the more likely it is that TQM implementation will succeed.*

The extent to which the organizational culture was perceived as positive or negative by city managers was measured by four items on a 5-point scale. The mean of cities that had implemented TQM was 3.27. The means of city managers' perceptions of their culture were correlated with the four indexes of TQM success. The results yielded a high and statistically significant and positive relationship between organizational culture and the level of TQM success based on managers' perceptions of positive results achieved from TQM implementation ($F = .52$, $p < 0.01$), and managers' assessment of their TQM implementation ($F = .41$, $p < 0.05$). TQM level of success based on employees' evaluation and based on the activities that had been undertaken did not correlate with organizational culture at $p < 0.05$.

With respect to organizational culture, the t-tests show that the existing organizational culture of cities with TQM was not more supportive than cities without TQM. Both groups were in the minus level with respect to the existing organizational culture, and both were far from the preferred culture by employees. In fact, the gap between the preferred and existing organizational culture was larger in the case of cities that had TQM. It is possible that the expectations of employees in cities that had implemented TQM were raised by the implementation of TQM, and thus the preceived gap is wider. However, improvement from the former culture toward the preferred culture was higher in the case of cities with TQM. The results show that cities with TQM moved from -21.66 (former organizational culture) to -14.15 (existing culture). A t-test comparing the two groups on the differences between former culture

and existing organizational culture yielded high and significant difference between cities with TQM and cities without TQM ($t = 2.02$, $p < 0.05$).

Despite the significant improvement from the former culture to the existing culture in the case of cities with TQM, the overall results suggest that both groups had more emphasis on controlling and constraining employees than on supporting and empowering employees (Harrison and Stokes 1992). Table 4 presents the types of former, existing, and preferred cultures in cities with and without TQM. It shows that cities with TQM, as well as cities without it, formerly had a power-oriented culture (41.29 and 40, respectively), currently have a role-oriented culture (41.68 and 41.59, respectively), and their employees would prefer an achievement-oriented culture (48.19 and 47.15, respectively). It should be noted that scoring very high in a power-oriented culture does not necessarily mean that a city has a power-oriented culture, rather the achievement orientation or the support orientation might be missing because the four types of culture are not independent (Harrison and Stokes 1992).

Table 4
Types of former, existing, and preferred culture in cities with and without TQM

Cities	Former Culture				Existing Culture				Preferred Culture			
	P	**R**	**A**	**S**	**P**	**R**	**A**	**S**	**P**	**R**	**A**	**S**
With TQM	**41**	40	33	27	37	**41**	33	31	22	34	**48**	43
Without TQM	**40**	39	33	29	38	**41**	33	31	24	35	**47**	41

P = Power-oriented organizational culture
R = Role-oriented organizational culture
A = Achievement-oriented organizational culture
S = Support-oriented organizational culture

H_{d2} *Cities with TQM programs are more likely to have a supportive organizational culture than cities without TQM programs.*

The type of organizational culture in cities that had implemented TQM was role-oriented (mean = 41) rather than support-oriented (mean = 31). The findings did not support the hypothesis; thus, the hypothesis that cities with TQM programs are more likely to have supportive organizational culture is rejected. It should be noted, however, that while it takes years to change the culture, 17 cities (65% of the cities included in this study that had a TQM program) started their TQM implementation efforts in 1992 or 1993, obviously not long enough ago to achieve major changes in organizational culture.

Ackoff, R. 1993. Beyond Total Quality Management. *The Journal for Quality and Participation* 16 (March): 66-78.

Bowman, J. 1994. At Last, an Alternative to Performance Appraisal: Total Quality Management. *Public Administration Review* 54 (March/April): 129-136.

Brown, M., D. Hitchcock, and M. Willard. 1994. *Why TQM Fails and What To Do About It.* Burr Ridge, Illinois: IRWIN.

Crosby, P. 1979. *Quality Is Free.* New York: McGraw-Hill Book Company.

---------- 1984. *Quality Without Tears.* New York: McGraw-Hill, Inc.

Deming, W. 1986. *Out of the Crisis.* Cambridge, M.A.: the Massachusetts Institute of Technology.

---------- 1988. The Need for Change. *The Journal for Quality and Participation* 11 (March): 48-49.

Eskildson, L. 1994. Improving the Odds of TQM's Success. *Quality Progress* 27 (April): 61-63.

Feigenbaum, A. 1989. Seven Keys to Constant Quality. *The Journal for Quality and Participation* 12 (March): 20-23.

---------- 1991. A Global Vision of Quality. *The Journal for Quality and Participation* 14 (July/August): 6-9.

---------- 1993. A Senior Manager's Quality Mindset: Edge for the 90s. *The Journal for Quality and Participation* 16 (March): 36-39.

Harari, O. 1993. Ten Reasons Why TQM Doesn't Work. *Management Review* 82 (January): 33-38.

Heinrich, G. 1994. Integrating TQM With Statistical and Other Quantitative Techniques. *National Productivity Review* 13 (Spring): 287-295.

Ishikawa, K. 1988. Group Wide Quality Control. *The Journal for Quality and Participation* 11 (March): 4-6.

Juran, J. 1988. Managing for Quality. *The Journal for Quality and Participation* 11 (March): 8-12.

---------- 1989. *Juran on Leadership for Quality.* New York: The Free Press.

---------- 1992. *Juran on Quality by Design.* New York: The Free Press.

Juran, J., and F. Gryna. 1993. *Quality Planning and Analysis.* 3rd ed. New York: McGraw-Hill, Inc.

Lindsay, W., R. Curtis, and G. Manning. 1989. A Participative Management Primer. *The Journal for Quality and Participation* 12 (June): 78-84.

Merron, K. 1994. Creating TQM Organizations. *Quality Progress* 27 (January): 51-54.

Milakovich, M. 1991. Total Quality Management in the Public Sector. *National Productivity Review* 10 (Spring): 195-213.

Moore, E. 1990. Transforming People and a City. *The Journal for Quality and Participation* 13 (July/August): 74-76.

Peters, T. 1988. Quality Equals Respect. *The Journal for Quality and Participation* 11 (March): 44-47.

Sarno, A. , A. Kolak, and E. Moore. 1990. *Total Quality Involvement in the Public Sector.* Paper Presented at the AQP Spring Conference Transactions. April. 04-IAP0490P-379.

Tagliaferri, L. 1991. *Total Quality Management Survey.* San Diego, California: Pfeiffer and Company.

U. S. General Accounting Office (GAO). 1991. *Continuous Improvement: The Quality Challenge.* Washington, D.C. GAO/QMG-92-1.

U. S. General Accounting Office (GAO). 1992. *Quality Management: Survey of Federal Organizations.* Washington, D.C. GAO/GGD-93-9BR.

U. S. Office of Personnel Management (OPM). 1992. *Presidential Award for Quality: 1993 Application.* Washington, D.C. FQI-PA93.

Walters, J. 1992. The Cult of Total Quality. *Governing* (May): 38-42.

Westinghouse, Engineering Technology Department. 1992. *Quality Plan.* Pittsburgh, PA.

References

AL-Khalaf, Abdullah M. 1994. *Factors that Affect the Success and Failure of TQM Implementation in Small United States Cities*. Ph.D. Dissertation, University of Pittsburgh, PA: USA

AL-Khalaf, Abdullah M. and J. Steven Ott. 1994. TQM Implementation in Small US Cities: Factors that Affect Successful Implementation. Paper Presented at the ASPA 55th National Training Conference, Kansas City, MO (July 23-27).

Allaire, Paul A. 1991. Quality: Where it Has Been and Where it is Going. *The Journal for Quality and Participation* 14 (March): 64-66.

American Productivity Center 1984. City of Phoenix. *Case Study 38, APC.* August.

Atkinson, Philip E. 1990. *Creating Culture Change: The Key to Successful Total Quality Management.* San Diego, CA: Pfeiffer & Company.

Balutis, Alan P. 1993. Implementing Total Quality Management: US Public Organizations' Experience. Paper Presented at the ASPA/CASU 54th National Training Conference, San Francisco, CA (July 17-21).

Barclay, Charles A. 1993. Quality Strategy and TQM Policies: Empirical Evidence. *Management International Review* 33, pp. 87-98.

Becker, Selwyn W., William A. J. Golomski, and Daniel C. Lory. 1994. TQM and Organization of the Firm: Theoretical and Empirical Perspectives. *Quality Management Journal* 1 (January): 18-24.

Box, George E. P., Laurel W. Joiner, Sue Rohan, and Joseph Sensenbrenner. 1991. Quality in the Community: One City's Experience. *Quality Progress* 24 (May): 57-63.

Brown, Alan. 1992. Industrial Experience With Total Quality Management. *Total Quality Management* 3 (2): 147-156.

Brown, James H., and William M. DeCrease. 1991. The First Baldrige - Based Community Quality Award. *The Journal for Quality and Participation* 14 (September): 82-88.

Burbidge, John. 1994. A Participative Model of Community Development. *The Journal for Quality and*

Participation 17 (January/February): 14-18.

Bushnell, David S., and Michael B. Halus. 1992. TQM in the Public Sector: Strategies for Quality Service. *National Productivity Review* 11 (Summer): 355-370.

Caldwell, Jack A., and Terence D. Hagen. 1994. Engineering Consultants Implement TQM. *Quality Progress* 27 (January): 57-63.

Carlisle, Jack, H., Jr. 1990. *Customer Service Teams as an Intervention Strategy in the Public Sector.* Paper Presented at the AQP Spring Conference Transactions, April. 04-IAP0490p-372.

Carman, James M. 1993. Continuous Quality Improvement as a Survival Strategy: the Southern Pacific Experience. *California Management Review* 35 (Spring): 118-132.

Carr, David K., and Littman, Ian D. 1993. *Excellence In Government: Total Quality Management in the 1990s.* 2nd ed. Arlington, V.A.: Coopers & Lybrand.

Chaufournier, Roger L., and Christine St. Andre. 1993. Total Quality Management in an Academic Health Care. *Quality Progress* 26 (April): 63-66.

Clinton, Bill. 1992. TQM: Agent of Change in Government Operations: Putting People First. *The Journal for Quality and Participation* 15 (October/November): 10-12.

Corradi, Peter R. 1994. Is a Cost of quality System for You? *National Productivity Review* 13 (Spring): 257-269.

Crosby, Philip B. 1979. *Quality Is Free.* New York: McGraw-Hill Book Company.

Crosby, Philip B. 1984. *Quality Without Tears.* New York: McGraw-Hill, Inc.

Cyert, Richard M. 1993. Universities, Competitiveness, and TQM: A Plan of Action for the Year 2000. *Public Administration Quarterly* 17 (Winter): 10-18.

Davis, Charles. 1986. Personnel and Local Governmental Productivity: Cooperation or Conflict? *Public Productivity Review* n. 39 (Fall): 27-34.

Deming, W. Edwards. 1986. *Out of the Crisis.* Cambridge, M.A.: the Massachusetts Institute of Technology.

Deming, W. Edwards. 1988. The Need for Change. *The Journal for Quality and Participation* 11 (March): 48-49.

Drummond, Helga. 1992. Another Fine Mess: Time for Quality in Decision-Making. *Journal of General Management* 18 (Autumn): 1-14.

Feigenbaum, Armand V. 1983. *Total Quality Control.* New York: McGraw-Hill, Inc.

Feigenbaum, Armand V. 1989. How to Implement Total Quality Control. *Executive Excellence* 6 (November): 15-16.

Feigenbaum, Armand V. 1991. Quality: an International Imperative. *The Journal for Quality and Participation* 14 (March): 16-18.

Feigenbaum, Armand V. 1993a. A Senior Manager's Quality Mindset: Edge for the 90s. *The Journal for Quality and Participation* 16 (March): 36-39.

Feigenbaum, Armand V. 1993b. Characteristics of World Leaders in Quality Are Remarkably Similar. *Total Quality News Letter* 4 (October): 7.

Galloway, Robert A. 1992. Quality Improvement and Heightened Self-Esteem: The Brighton Police Story. *National Productivity Review* 11 (Autumn): 453-461.

Garrity, Rudolph B. 1993. Total Quality Management: an Opportunity for High Performance in Federal Organizations. *Public Administration Quarterly* 16 (Winter): 430-459.

Grayson, C. Jackson, Jr. 1988. The Relationship of Quality and Productivity. *Productivity Brief # 65, APC.* June.

Greiner, John M. 1986. Motivational Programs and Productivity Improvement in Times of Limited Resources. *National Productivity Review* n. 39 (Fall): 81-101.

Gruman, Gregory Dean. 1989. "Quality Improvement at Work in Government," In *Government Quality and Productivity-Success Stories,* Henry L. Lefevre ed. (Milwaukee, Wisconsin: ASQC Quality Press 1992): 191-196.

Gryna, Frank M. 1988. "Quality Costs", In *Juran's Quality Control Handbook* 4th ed. Joseph M. Juran and Frank M. Gryna eds. (New York: McGraw-Hill, Inc. 1988): 4.1-4.30

Harrison, Stephen J., and Ronald J. Stupak. 1993. Total Quality Management: the Organizational Equivalent of Truth in Public Administration Theory and Practice. *Public Administration Quarterly* 16 (Winter): 416-429.

Ishikawa, Kaoru. 1985. *What Is Total Quality Control? The Japanese Way.* Englewood Cliffs, New Jersey: Prentice Hall.

Ishikawa, Kaoru. 1988. Group Wide Quality Control. *The Journal for Quality and Participation* 11 (March): 4-6.

Juran, Joseph M. 1989. *Juran on Leadership for Quality.* New York: The Free Press.

Juran, Joseph M. 1991. Strategies for World-Class Quality. *Quality Progress* 24 (March): 81-85.

Kane, Edward J. 1992. Implementing TQM at Dunn & Bradstreet Software. *National Productivity Review* 11 (Summer): 405-416.

Keehley, Pat. 1992. TQM for Local Governments. *Public Management* 74 (August): 10-16.

Kolesar, Peter J. 1993. Vision, Values, Milestones: Paul O'Neill Starts Total Quality at Alcoa. *California Management Review* 35 (Spring): 133-165.

Maggiotto, Michael A., and Frank McKenna, Jr. 1992. Assessing Productivity and Management in Local Government. *Public Productivity & Management Review* 15 (Spring): 309-313.

Mahisi, Mohammad H. 1980. Productivity and its obstecales in the Saudi Arabian Public Sector. Paper Presented at the Symposium in Productivity in the Public Sector and its Obstecales, Institute of Public Administration, Riyadh, Saudi Arabia (25-28, 2, 1400).

Marlowe, Herbert A., Jr., and Ronald C. Nyhan. 1993. *Reinventing Public Organizations: Using the Punctuated Equilibrium Paradigm as a Model to Understand, Explain and Guide the Change Process.* Paper Presented at the ASPA/CASU 54th National Training Conference, San Francisco, C.A., 17-21 July.

May, Colin, and Alan W. Pearson. 1993. Total Quality in R&D. *Journal of General Management* 18 (Spring): 1-22.

Mazany, Terry. 1993. Putting Service Back Into a School's Central Services. *The Journal for Quality and Participation* 16 (January/February): 32-36.

McDonnell, John F. 1992. Three Years of Total Quality Management. *The Journal for Quality and Participation* 15 (January/February): 6-9.

Mead, Polly, Elizabeth Rasmussen, and John Seal. 1986. Quality Assurance in the Equal Employment

Opportunity Commission. *National Productivity Review* 5 (Autumn): 363-375.

Mead, Polly, Elizabeth Rasmussen, and John Seal. 1987. "Quality Assurance in the Equal Employment Opportunity Commission," In *Organizational Excellence: Stimulating Quality and Communicating Value,* Joseph S. Wholey ed. (Lexington, Massachusetts: Lexington Books, 1987): 77-93.

Milakovich, Michael E. 1991. Total Quality Management in the Public Sector. *National Productivity Review* 10 (Spring): 195-213.

Mokrzycki, Betsy. 1991. Successful Leadership in Local Government Programs: Syracuse's "448-CITY." *Public Productivity & Management Review* 15 (Winter): 253-255.

Moore, Ernest. 1990. Transforming People and a City. *The Journal for Quality and Participation* 13 (July/August): 74-76.

Morgan, Martha N., and Glenn L. Taylor 1993. Quality Improvement Can Work in R&D. *The Journal for Quality and Participation* 16 (July/August): 86-93.

Nyhan, Ronald C., and Herbert A. Marlowe, Jr. 1993. *Performance Measurement and Total Quality Management in the Public Sector.* Paper Presented at the ASPA/CASU 54th National Training Conference, San Francisco, C.A., 17-21 July.

Osborne, David, and Ted Gaebler. 1992. *Reinventing Government.* New York: Plume.

Palumbo, George, and Seymour Sacks. 1993. *Municipal Debt, Local Government and Fiscal Stress.* Paper Presented at the ASPA/CASU 54th National Training Conference, San Francisco, C.A., 17-21 July.

Pfister, A. J., and Monty Van Wart. 1993. Successful Examples of TQM in State and Local Government. Paper Presented at the ASPA/CASU 54th National Training Conference, San Francisco, CA (July 17-21).

Ritter, Don. 1991. America's Quality Revolution. *The Journal for Quality and Participation* 14 (March): 60-63.

Robson, Mike. 1991. TQM, the Easy Sell -- the Hard Reality. *The Journal for Quality and Participation* 14 (March): 36-40.

Rosander, A. C. 1989. *The Quest for Quality in Services.* Milwaukee, Wisconsin: ASQC Quality Press.

Roth, Bill. 1993. Is it Quality Improves Ethics or Ethics Improves Quality? *The Journal for Quality and Participation* 16 (September): 6-9.

Sarno, A. J., Alvin Kolak, and Ernest D. Moore. 1990. *Total Quality Involvement in the Public Sector.* Paper Presented at the AQP Spring Conference Transactions. April. 04-IAP0490P-379.

Scott, William B. 1989. TQM Expected to Boost Productivity, Ensure Survival of U.S. Industry. *Aviation Week & Space Technology* (December 4): 64-69.

Scott, William B. 1990. Aerospace Defense Firms See Preliminary Results from Application of TQM Concepts. *Aviation Week & Space Technology* (January 8): 61-63.

Shetty, Y. K. 1993. The Quest for Quality Excellence: Lessons from the Malcolm Baldrige Quality Award. *SAM Advanced Management Journal* 58 (Spring): 34-40.

Spitzer, Richard D. 1993. Valuing TQM Through Rigorous Financial Analysis. *Quality Progress* 26 (July): 49-54.

Stratton, A. Donald. 1991. StorageTek and Excellence Through Quality. *The Journal for Quality and Participation* 14 (December):6-9.

Swiss, James E. 1992. Adapting Total Quality Management (TQM) to Government. *Public Administration*

Review 52 (July/August): 356-362.

Taguchi, Genichi. 1986. *Introduction to Quality Engineering.* Dearborn, Michigan: American Supplier Institute Inc.

U. S. General Accounting Office (GAO). 1991. *Management Practices, U. S. Companies Improve Performance Through Quality Efforts.* Washington, D.C. GAO/NSIAD-91-190.

U. S. General Accounting Office (GAO). 1992. *Quality Management: Survey of Federal Organizations.* Washington, D.C. GAO/GGD-93-9BR.

U. S. Office of Personnel Management (OPM). 1992. Investing in Federal Productivity and Quality: A Report to Congress. OPM. Washington, D.C.

Ublig, Keith. 1994. The Minnesota Pollution Control Agency Hones in on Strategic Direction. *National Productivity Review* 13 (Spring): 197-203.

Walters, Jonathan. 1992. The Cult of Total Quality. *Governing* (May): 38-42.

West, Jonathan P. 1986. City Government Productivity and Civil Service Reforms. *Public Productivity Review* n. 39 (Fall): 45-59.

West, Jonathan P., Evan M. Berman, and Michael E. Milakovich 1993. Implementing TQM in Local Government: The Leadership Challenge. *Public Productivity and Management Review* 17 (Winter): 175-189.

Whitten, Shirley K. 1989. Award-Winning Total Quality at the Naval Publications and Forms Center. *National Productivity Review* 8 (Summer): 273-286.

Wiley, Jack W., and Bruce H. Campbell. 1986/1987. Assessing the Organization to Identify Productivity-Improvement Opportunities. *National Productivity Review* 6 (Winter): 7-19.

Yoshida, Nagao. 1991. A New Scenario for Productivity Challenges. *The Journal for Quality and Participation* 14 (July/August): 78-80.