PRODUCTION AND OPERATIONS MANAGEMENT
Vol. 4, No. 3, Summer 1995
Printed in U.S.A.

PERSPECTIVES

PARTIAL QUALITY MANAGEMENT: AN ESSAY*

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A serious gap is emerging between what is espoused as total quality management and what is actually being implemented. Examples of actual implementation failures are given. In addition to affecting the offending firms, these gaps threaten the viability of the quality management movement in the United States. Their causes and appropriate counter measures are worthy topics for research.
(TOTAL QUALITY MANAGEMENT; IMPLEMENTATION GAPS; TQM RESEARCH)

Hardly a decade old and still full of promise, the quality management movement in America is in danger. Beneath banners espousing total quality management (TQM), too many American companies are implementing what should be more accurately described as "partial quality management." The gaps between the self-laudatory TQM pronouncements made at the tops of corporations and the reality of the *partial quality management* implementations on the ground are often considerable. Of course, they are dangerous to the prosperity of the offending companies. Taken cumulatively across a significant number of firms, these shortcomings are potentially lethal to the vitality and effectiveness of the quality movement itself. For all who believe that TQM can be a major positive economic and social force, the looming problem is quite serious.

Before detailing what prompts these concerns, we can all agree that U.S. industry has made considerable progress in the roughly 15 years of the TQM movement. (Of course, such a movement has no clearly defined birth, but I think that the 1981 airing of the famous NBC-TV White Paper "*If Japan Can Why Can't We*?" is a convenient, if slightly arbitrary, starting reference point.) The American quality/productivity situation was indeed quite grim in the late 1970s and early 1980s (Deming 1982; Juran 1979; Halberstam 1986; Starr and Ullman 1988; Lamm 1988). Market after market appeared to be irrevocably lost to foreign competition, and the momentum was negative. Across a broad front of industries American enterprises looked simply incompetent. Still worse, U.S. management either didn't appear to understand the methodological and philosophical underpinnings of these performance gaps or have the patience and discipline to implement fundamental corrections (Deming 1986; Juran 1988). In most cases quality was at least one of the root causes. There was as yet no consensus on what quality control or quality

* Received March 1995; revised August 1995; accepted August 1995.

1059-1478/95/0403/195$1.25

management should be. Many managers were erroneously seduced by simple prescriptions and the mantra that "Quality is Free." (Crosby 1979). Still others thought only of technical interventions like statistical control charts or Japanese inspired quality circles. However, when these were attempted on their own outside of a comprehensive approach, they yielded little benefit. It would be years until the first Malcolm Baldrige National Quality Awards would by Americanizing Japanese-style "Company Wide Quality Control," begin to clarify what quality management was and what its impact might be for American managers (Mizuno 1988; Ishikawa 1985; NIST 1995).

Fortunately, over roughly a decade things have changed—even more than some early leaders might have hoped (Juran 1979, 1985, 1993). For one important example, while U.S. autos are not yet at full quality parity with their Japanese competitors, the quality differences are now close enough that hemorrhaging in that bellwether industry has been stanched. Two prominent Baldrige winners, Xerox and Motorola, both of whom were in mortal danger from foreign quality competition, have both competed successfully with the Japanese. Moreover, in the process each has added to the arsenal of TQM tools and strategies. I'm thinking first of Motorola's "Six Sigma" strategy on process capability and process control, and of its focus on cycle-time reduction. Perhaps even more influential, has been Xerox's "Competitive Benchmarking" approach to setting performance targets and identifying best practices (Kerns and Nadler 1992; Jacobsen and Hillkirk 1986). We can take some comfort from the fact that, in addition to such anecdotes of individual company successes, we are beginning to see statistical and economic studies that support the hypothesis that quality management pays off (Easton and Jarrel 1994; Hendricks and Singhal 1995).

Yet, as I stated in opening, notwithstanding this progress, there are reasons to be very concerned with the health of the American quality management movement. Why so? Three sources of troubling signals quickly come to mind. First, is the popular business press from which we see a stream of articles that are harshly critical of quality management (The Economist 1995; Fuchsberg 1992; Greisling 1994; Mathews and Katel 1992; Business Week 1994). We find in such articles reports of prominent Baldrige or Deming prize-winners suffering severe business difficulties. In extreme cases, such as at Florida Power and Light, quality programs have been terminated. The days of laudatory special issues and cover stories on quality management seem to be gone (Business Week 1987, 1991). Second, criticisms from academics have begun to echo the concerns in the popular press and provide theories for the shortfalls (Easton 1993; Reger et al. 1994; Hackman and Wageman 1995). Overall, a message is emerging that TQM does not really produce, and the prognosis is for its future are grim. A third troubling symptom is that despite the very public urging and support from a group of corporate quality zealots (Robinson et al. 1991) only modest moves have been made by American business and engineering schools to bring quality management ideas into classrooms. During 1992 and 1993 some 20 universities sent large blocks of faculty off on week long "TQM Awareness" training seminars at leading TQM companies. Anecdotes circulate that as many faculty were turned off TQM as were turned on. Are there well-founded reasons for the resistance of the academy to joining the total quality bandwagon?

But these accounts and symptoms do not drive my reservations. My principle concerns come from my first-hand experiences inside TQM-implementing firms. Almost invariably when I get to look in depth (under the surface) at what TQM-implementing companies are actually doing, I am disenchanted and disappointed. The gap between the public posturing of companies on quality management—which I call the "TQ Party Line"—and the reality of execution on the ground is enormous. Worse, internal communications that descend from the boardroom to the shop floor echo the unrealistic public pronouncements. But, the front-line troops know better. As a consequence many employees inside these "TQM" firms become quietly cynical. To those who must do the implementing, TQM becomes a wry joke. And, ironically this occurs at the very same time that research journals like this one are showing real interest in the subject. We are at risk of researching a fading phenomenon. Let me share with you a number of cases in point. All are based on direct experiences and observation.

- At a company prominent in the TQM movement for having made benchmarking a cornerstone of its quality management process, managers were interviewed during an effort to increase "management by fact." Few could answer the question, "Who is the best inside this company (or outside it) at doing what your group does?" Indeed, the managers seemed stunned at the question. It appeared that they never asked, or were asked such questions. Across the company only a corporate few benchmarks existed, and even these were largely out of date. The company's actual planning process, in contrast to avowals to the contrary, did not systematically employ benchmarks. So much for claims of a transformation of corporate culture around the concept of benchmarking. Several years ago the company went through a quite elaborate Baldrige-based self-evaluation of its quality management processes and practices. A lengthy list of significant shortfalls was identified and public commitments made to attack them. Years later few have been addressed and now the company claims to be moving "beyond Total Quality."
- A major business publication interviewed the CEO of an aerospace firm. The resulting article fairly glows about his championing of TQM. With considerable fanfare the company in question has undertaken a series of "TQ This" and "TQ That" initiatives over the last several years. None of these has ever been completed. Within a year or so of introduction, each initiative runs out of gas. The root causes of the implementation failures are not determined nor addressed by management. Instead, each stale aspect of the grand TQM program is followed by a fresh "TQ Something Else" initiative that will allegedly solve another quality problem—or re-solve the same old quality problems left hanging by its predecessors. In this spirit, the company's latest quality *trick* will be to implement a Motorola-style six sigma program. Now, according to the corporate leadership, "Things will really improve and fast because our corporate 'stretch' defect target is 3.2 ppm in everything we do!" But, circuit boards supplied by an internal fabricating division to the assembly division fail at a rate of nearly 150,000 ppm, and the supplier and assembler divisions are hardly on speaking terms! The assemblers began a statistical study of circuit board quality without informing the supplier—and vice versa. There was no effective quality data exchange between divisions. Because most of the externally purchased logic chips used on the circuit boards fail functional tests, inspectors at the assembler facility routinely replace them with chips from another higher quality supplier—before even doing the functional test! It's simply easier and cheaper that way. Meanwhile, the manufacturing division continues to install the offending parts. They are cheaper to purchase, and the manufacturing division bears the purchase costs—and none of the rework costs—on its books. Both divisions are under extreme pressure from the CEO to execute the TQM agenda, but of course "while making the revenue and growth numbers." Though it is not openly discussed, no one inside middle management really surprised. Making the numbers drives this behavior, and the hourly employees and the union are frequent scapegoats. During a poignant focus group meeting with hourly employees, one machine operator told of going to her supervisor with a serious quality problem, looking for some help. The response was, "What's the shipment date, and how are you going to meet it?"
- A leading health care company's product could be injurious to its customers if the product does not conform to quality specifications. In extreme cases nonconformances could cause death. Product quality is the (espoused) number one corporate ethic. However, senior management leaves the architecture and implementation of

the quality management processes at its several production facilities as the prerogatives of local facility management. As one would expect, the intensity and effectiveness of the local attacks on nonconformances vary greatly across facilities, and the "Quality Process" gets little corporate monitoring or support. Yes, the avowed policy from headquarters states that quality is the highest corporate value, yet the facility managers know that their bonuses and their careers depend on beating budgeted production cost per unit. Untold dollars—perhaps millions—are expended to train lower level employees in a PDCA-based team problem-solving process. But there is no follow-through after the training, no change to the managerial infrastructure to take advantage of this new capability. As a result, only a year later an internal audit team found almost no utilization of the problem solving process. At one facility, in the weeks immediately prior to their visit the "Quality Process" was dusted off for their visit. Neither local employees, nor the audit team were fooled. Senior management did not react to the audit report.

- A leading information technology firm constructs one of the grandest TQM designs imaginable. Almost every TQ concept and tool is included: six-sigma, benchmarking, re-engineering of core business processes, policy deployment, high-performance work teams, focus on the market and metrics on customer satisfaction. (The au courant term *metrics* is in fashion here, the simpler word *measures* does not cut it.) As elsewhere, there are the training courses, the manuals, the policy and vision statements on the wall, the off-site senior management retreats, and all the rest of TQ baggage. The CEO becomes quite prominent in national TQM circles and gives advice freely to other companies on the paths to quality—and to government and universities as well. However, all attempts by his own company's sales and marketing force to implement the elaborate TQM program get nowhere. The effort is worse than a simple failure. The detailed flowcharts, software systems, complex jargon and interlocking processes that were intended to define the TQM program for the sales force are simply incomprehensible. No one on the front line knows what to do. Worse, the company culture does not permit this show-stopper issue to surface—no one can admit that they do not understand what to do. When the "bias for action" that is deep in the firm's macho management culture encourages pretense, sales reps proceed to mindlessly fill out the forms needed to compute the quality *metrics*. The actual selling and customer interactions are done just as before. Demoralization sets in.
- In a similar vein, a major forest products company mounts a full featured corporation-wide TQM effort. It is initiated by the CEO himself after hearing a speech by a fellow Fortune 100 CEO. As is his custom, he delegates implementation to his direct reports, who delegate it to theirs, and so on down to the mill floor. Despite its investment in impressive logos, TQM courses and the lofty statements in the annual report, the employees are very guarded in their response. Little evidences of inconsistency on senior management's part rocket along the hourly employee and middle management grapevines at warp speed. And why not? Bigger evidences of inconsistency follow soon. Four months after the TQM kickoff, a major down-sizing is announced. In effect employees are being asked, "Would you be so kind as to work hard on this "Quality Action Team" to help us eliminate your job?" Even those who survive the cuts will never have the same enthusiasm. As at other TQM companies, policy posters state that "Quality is first among equals with cost and response time as our priorities." About a year into the TQM effort the CEO attends a reception for quality assurance engineers who are graduating from an advanced statistical process control course. The CEO is asked by one of the grads, "What is the most important thing we can do now for the company?" The CEO responds, "Keep that tonnage up." The quality engineers know immediately what this portends. Nothing of substance will change. Needed preventive maintenance will continue to be foregone in the plants so that

daily production quotas can be met. The gloom that descends on the room is palpable, but no one says a word. Each mill in the system must report its production and shipment figures to headquarters daily. Everyone from the mill manager down to the mill hand operates under the tyranny of making these production numbers. At the daily "Morning Meeting" of the mill manager and his direct reports problems that require attention are supposed to be surfaced for resolution. Actual behavior is quite different. Department supervisors, like schoolboys hoping their parents will not discover the truth, hide problems as long as they can. A poster of Deming's 14 Points decorates the wall of the mill conference room—Point 8. *Drive out fear.* Indeed!

These stories are not isolated horrors unfairly selected from otherwise healthy TQM implementations. They are, as best I can tell, typical of what was happening in these firms. There are more such incidents from each of these companies, and indeed I have their like from many other firms as well. They are, I trust, sufficient to capture the essence of the "posturing-implementation gap" that I have experienced almost every time I have gotten to look "under the TQM hood." (My personal experience base is quite broad. In addition to extensive consulting engagements at say a dozen firms, I have over the last decade, together with my students, been able to study first hand the front line TQM implementations in roughly 40 different companies spread across many industries.) If it is true, as I suspect, that these shortfalls are typical and frequent then the American quality movement must necessarily lose its momentum, and its actual contribution to the vitality and competitiveness of our society will not be fulfilled.

Apart from the handful of articles I cited from the popular business press and even fewer academic writings, there has been relatively little discussion of this issue *within* the TQM community. It is not clear whether this means that there is a lack of awareness or that there is a silence in the face of awareness. It is probably a bit of both, but for several reasons I suspect that the latter is the more dominant phenomenon. First, for an insider it is seldom healthy to be a sharp critic. To state privately, let alone publicly, that "the emperor's clothes are tattered," can be personal folly—particularly in this era of corporate down-sizing. It is simply not politically safe for managers to call the shortfalls as they see them in the face of contrary corporate proclamations. Second, it is difficult for outsiders to get the facts about actual implementation. Access is limited—and, when one does have access it is likely to be under conditions of confidentiality and privilege, or for short duration in situations when it is in the interest of the organization to put its best face on things—like during a Baldrige review. Third, it is possible that there has been a subtle co-optation of some who would otherwise be natural critics. A decade ago most TQM advocates were outsiders or isolated visionary revolutionaries inside companies. The critical role came naturally to them. Perhaps the quintessential outsider was W. Edwards Deming, himself. But Deming has passed from the scene and those who might be critics today have largely become members of a growing TQM establishment. Their fervor for what would now be self-criticism is naturally slight.

If I am right, the situation is very serious. Let me be clear. I am not alleging that nothing worthwhile is happening in TQM efforts. That would be inaccurate, unfair and counterproductive. I am claiming that few corporate TQM efforts come close to meeting the public or private ambitions of their originators. Nor are they fulfilling their potential contributions to increased quality and productivity within their own companies. Worse, taken collectively across the economy we are facing a serious credibility and performance gap for TQM itself. A polite way to sum up is to state that "The TQM glass is at best half full."

One cannot solve a problem that is not being discussed—that is not defined. A first important step is to gather more data, more anecdotes. It is possible that my stories are "special" rather than "common." If so, particular attacks on them focused on the special causes at the offending firms will suffice. If however, I am right and they are general national phenomena, Deming's aphorism that "the problem is with the system" applies on a grand scale. Something deeper is called for. The question of whether under the ambitious banner of *total quality management* we have in point of fact been doing *partial quality management* should be answered. The quality management and business communities should be directly interested—including we researchers. It is a most worthy research project to determine why this is happening and what we should do about it.

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