SECTION 39
QUALITY IN CENTRAL AND EASTERN EUROPE

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OBJECTIVES OF THIS SECTION

This brief survey of quality as experienced in central and eastern Europe has two principal objectives:

1. To review the history of the region, especially with respect to how quality has been managed
2. To identify the forces now at work which may affect the way quality is managed in the future

RECENT HISTORY OF CENTRAL AND EASTERN EUROPE

Central and Eastern Europe Defined. In this section, "central and eastern Europe" signifies the area of Europe whose countries, in the period beginning in the years following World War II proclaimed themselves socialist or communist under single-party rule. This includes the countries which were allied with the Soviet Union (U.S.S.R.)—Bulgaria, Czech Republic, the German Democratic Republic, Hungary, Poland, Romania, and Slovakia—or were actually incorporated into it as socialist republics—Belorus, Estonia, Latvia, Lithuania, Ukraine. It also includes socialist countries that stood apart from the U.S.S.R.—Yugoslavia and Albania. And, because of its decisive influence in quality as in other matters in this region, we include Russia, then at the center of the U.S.S.R. This is not a complete list, nor have we tried to anticipate the emergence of new countries in the region as the result of negotiation or civil war. For a discussion of quality the list will suffice; it contains the most industrialized and therefore the most influential countries in the region regarding quality.

Recent History. It is good to remember that the recent history of this area, both economic and political, is a turbulent one. The experiences of self-rule before 1989 were brief and scattered. In the

countries that were the remnants of the Austro-Hungarian Empire or Prussia, self-rule was limited to the period following the end of World War I, in 1918. Those newly independent countries were Austria, Hungary, Poland, Czechoslovakia, Yugoslavia, and the Baltic states of Lithuania, Latvia, and Estonia. Self-rule for them effectively ended with the rise of Nazi Germany, beginning around 1935. After that there was occupation, World War II, and more occupation. Soon after the end of World War II in 1945, with the exception of Austria, all of them, plus eastern Germany, became communist, under the rule of various national Communist Parties, most dominated by the Soviet Union through economic and military agreements enforced by military power. All told, there was little over a decade to develop democratic forms, too short a time to establish democratic traditions. Further, during the 40 and more years before 1989, the experience with market-based economics in central and eastern Europe was limited to black markets, transactions outside of state control, and condemned and punished as criminal.

It is this common history and the challenges which that history poses that bind these countries with respect to quality. Each of the countries, whatever the new form of organization toward which it is tending, aspires to create products—goods and services—which can compete in the world marketplace. And each must find a way to create the environment in which that aspiration can be fulfilled.

Political and Economic Organization under Communism. This part of Europe is in transition. Rather than speculate where each will be in the future, it is perhaps more fruitful to look backward and examine the common factors which today affect the state of quality in this region.

For over 40 years (longer in the case of Russia), the region was governed under a political-economic model dramatically different from that of the Western countries. The model and the consequences of its implementation created the climate for industrial quality. The features of the model profoundly affected the management of quality. The habits of management and thought left behind still affect quality management. Some of the features and their effects were

- *The economy was centrally planned.* Smith (1976) discusses some of the effects in Russia of commitment to plans issuing from the top of the political hierarchy and promulgated downward. There was pressure on managers to "meet the plan." Fearing retribution for failing to make the plan, and motivated by a system of bonuses for meeting the plan, managers throughout the economy resorted to all manner of shady schemes to either meet the plan or be certain that blame for failure to do so was attributable elsewhere. These distortions led to unrealistic plans, which in turn led to increasing shortages of materials throughout the economy, with which managers had to deal with increasingly creative dishonesty.
- *In effect, the state was the only customer.* Regarding consumer goods, this meant that huge central agencies represented the needs and wishes of the general population. There was no direct customer input to the design of goods or delivery of services, and no effective feedback of product experience in the field. The consumer had to accept what was available and suffer with the quality (Smith 1976).
- *Orientation was toward production volume. The central plan required commitment to numerical production quotas.* The most obvious shortcut to meeting the plan (or to exceeding it and achieving production stardom) was to shortcut quality. Khrushchev (1970) describes his investigation of an epidemic of failing automobile tires. He found that the factory had, at the request of a visiting commissar of transport, reduced the amount of reinforcing wire at the edges and of cording under the tread. This action was motivated by a wish to meet the plan and save material. Unfortunately, it was uninformed by the technical requirements of an automobile tire. Although the incident took place in 1939, it was typical of the problems that continued to plague industry under the communist system.
- *Much of the industrial production was committed to military purposes.* The military, as the preferred customer, always enjoyed direct input in the factories, and had either their own "closed" plants or plants for mixed civilian-military production. High priority for the military meant consequent low priority for the remainder of the economy. The practical effect was a two-tier system of quality. The first tier was occupied by military goods; the second tier by everything else.

- *The plan committed the state to heavy-industrial development.* In the earliest days of communist rule in Russia, this policy was based on the objective to convert an agrarian economy into an industrial one. The policy outlasted the need and became an end itself, promoted for propaganda purposes (Smith 1976). This has left the entire region with gigantic factories unable to react to rapidly changing market demands and rapidly changing technology.
- *There was little or no private ownership of property.* The most apparent effect of public ownership was the disregard for maintenance evident in decaying public works of all sorts—factories, apartment blocks, sewer systems, and so on. One expert in the region (Behrman 1998) has observed that "where the owner is 'everyone,'…no one feels responsible for maintenance." A related effect was the perfecting of a notoriously poor work ethic, summed up in the workers' joke: "We pretend to work and they pretend to pay us."

Effects of the Political and Economic Organization. Implementation of this system and its plans and goals involved cultural changes on an unprecedented scale. Motivation was presumably based on the common good, not the good of the individual, but this motivation was never sufficient. At least one Western student of the Soviet Union (Figes 1997) has observed that communism was bound to fail because it sought to achieve the impossible: the transformation of human nature.

From the start, state coercion played a large role in moving plans forward. There was state control of information and cultural affairs, reflected in censorship of publications unfriendly to the state and punishment of dissident behavior. At the factory level, authoritarian management prevailed.

Information control had many adverse implications for quality. The reactor explosion at Chernobyl in 1986 dramatically revealed some of these. Before the accident, it was government policy to conceal from the general public accidents at nuclear power stations and to forbid publication of "information about the unfavorable ecological impact of energy-related facilities on operating personnel, the population, and the environment." This contributed to widespread complacency when the accident occurred. Further, in 1985, a newly appointed minister of energy further impeded exchange of information and reduced the ability to anticipate and prepare for reactor accidents by abolishing the central coordinating body of the ministry. Most obviously, when the accident occurred, the authorities failed to alert the immediate population and the people who lived downwind of the accident, resulting in extensive unnecessary exposure to radiation (Medvedev 1991).

By 1995, among children in the affected area, the incidence of thyroid cancer was reported to be 285 times the preaccident rate (Crossette 1995). Medvedev (1991), a Russian expert in nuclear power, condemns generally the government's control of information with these words in the preface to his account of the Chernobyl disaster: "…Chernobyl demonstrated the ignominious failure and the sheer insanity of the administrative-command system."

On a less frightening dimension, the concentration of economic information and decision making in the hands of a few resulted in widespread ignorance of microeconomic and financial concepts, contributing also to poor preparation for life in a market economy.

Quality Management—1945 to 1990: State Quality Control

Council for Mutual Economic Assistance (CMEA). During the communist period, most countries in the area, under the leadership of the Soviet Union, formed a trading alliance—the Council for Mutual Economic Assistance. Among other matters of mutual concern, the alliance cooperated on the approach to industrial product quality. Between 1971 and 1980, the CMEA introduced programs to promote economic integration among CMEA countries. One requirement for success was the development and adoption of a wide variety of uniform quality standards.

Unified System of State Quality Control (USSQC). The approach to quality was based on a Russian model established in 1978, known as the Unified System of State Quality Control. Under USSQC, quality control was a function of the central government, involving the coordination of economic planning (including planning for quality control at all levels of the economy). USSQC is described in detail by Egermayer in the fourth edition of this Handbook (Egermayer 1988).

In practice, the most widely adopted function of these state QC systems was product certification, according to three quality categories or grades: highest—products whose quality reaches or surpasses the highest quality level of comparable domestic or foreign products; first—products whose characteristics satisfy the requirements of currently valid technical standards; and second—products whose characteristics do not satisfy current requirements and are of poor quality. [These categories probably correspond to those described earlier by a metalworker in a Russian steel factory, as reported by Smith (1976): first, for the military; second, for export; and third, for "common" domestic use.]

Details varied from country to country, but "highest" and "first" grade products generally carried an approval stamp of certification from a national laboratory.

Although there were official reports of general improvement in product quality as a result of this system, Egermayer (1988) reported that implementation of product certification in the CMEA countries was "not uniform, and certification results [were] not internationally valid."

Price premiums and penalties were awarded to factories, according to the outcome of product certification tests of the factory's product. These incentives were supposed to provide strong motivation and promote the interests of manufacturers in the achieving product certification and improving product quality. In fact, the effects were slight.

USSQC included direct quality control at the worker level, based on three principles: (1) The majority of errors committed by an employee on the job can be prevented, (2) every employee is responsible for the quality of work done and therefore is obliged to control it, and (3) every employee should know the exact job duties and must be given all facilities to accomplish them. As implemented, the system evolved to include worker certification for self-inspection, financial bonuses for attaining such certification, and measures of workers' quality performance.

This system was adapted to various national cultures, appearing as "Fehlerfrei Arbeit" (failure-free work) in the German Democratic Republic, "DO-RO" (shorthand for "good work" in Polish) in Poland, and so on.

The USSQC approach fit comfortably with the Soviet ideals of centralized planning and control. However, evidence is scarce of competitive results attributable to the system itself.

More on the Two-Tier System. Some military goods were—and continue to be—successful, even in the export market. Russian rockets are an example. The rockets are now in great demand for launching commercial communications satellites. The rockets appeal to commercial customers not because of leading-edge technology (which they don't have), but because of high reliability in service, low initial cost, and ease of maintenance. These characteristics are traced to simple and rugged design, typical of many Russian military products (Broad 1996).

The story is different for consumer goods, whose reception in Western markets has been cool at best. For example, automotive products, such as Lada (U.S.S.R.), Yugo (Yugoslavia) and Daccia (Romania), and farm tractors, such as Belorus (U.S.S.R.) and Ursus (Poland), were unable, despite dramatic price advantage, to overcome their quality deficiencies in competition with Japanese and Western products.

USSQC could not achieve the stated objective of a high rate of quality improvement. The structure of incentives always favored military goods, never consumer goods. Furthermore, the system described was at complete odds with the social conditions existing in the factories. First, standards for consumer goods were technical standards, established centrally, at a great social distance and with little input from the consumers who would actually use the products involved. Second, the contribution of metrology depended largely on the appropriateness of the standards used. If the standard were not appropriate—for example, for lack of input from the consuming public—it mattered little how precisely and accurately the product was measured or how high the product scored against standard. Beyond that, the environment of chronic shortage of material and parts meant that managerial energy was concentrated on making production quotas, not on quality. Finally, emphasis on inspection was in sharp contrast to the Western experience in recent years. In the West, industrial managers have learned that it is futile to "inspect in" quality. Dependence on product inspection as a means for quality attainment has been generally abandoned in favor of control of the process by which the product is made.

Evidence of poor quality results is plentiful in technical literature from former CMEA countries, in periodicals and general literature, and in accounts of contemporary travelers. Hedrick Smith's "The Russians" (1976) and "The New Russians" (1990) treat the matter of productivity and quality as part of his studies of the Russian people.

How It Worked. Juran (1994) summarized the Soviet approach to quality management in consumer goods with an example:

Consider a product such as shoes. A planning ministry decided what shoes to produce (styles, sizes, quantities, schedules, etc.), a production ministry made plans to produce the shoes, dividing the work among the various production facilities, a marketing ministry planned for the distribution and sale of the shoes, and the consumer bought the shoes at a retail outlet—perhaps a shop or a store at his or her place of work. The standardization ministry was responsible to create appropriate quality standards. (In fact that ministry, faced with the need for large numbers of standards, itself had a quota for the production of standards.) The enforcement branch of the standards ministry provided inspection at the factory. The factory's income depended in part on the quality level as determined by the inspectors. It was illegal to ship substandard goods.

Under this system, if a consumer discovered a defect in a pair of shoes, he or she complained to the manager of the shop where they were purchased. That complaint had to work its way up through the hierarchy of the marketing ministry—consumer to store manager to local office of the marketing ministry, then up the chain in that ministry to a minister, then into the production ministry hierarchy—say "production" to "light industry" to "shoes" and finally to the factory where the shoes were made. The process took months, and by that time the complaint might have undergone some amazing distortion along the way (see also Kamm 1995). Whether relief of the problem resulted, indeed, whether the information was of any use at all by that time, is questionable. Thus was the system in practice deprived of two vital elements of effective quality control: rapid and direct feedback on deviation from standard; and the direct input of the customer.

One characteristic of consumer commerce in the Soviet era, noted by virtually all writers on the subject of the Soviet Union's consumer marketplace, was the absence of customer orientation on the part of sellers—shop personnel and retail service providers—and the powerlessness of consumers to stimulate a change. In fact, the very word "customer" within the communist system had a whiff of the counterrevolutionary about it and was better not mentioned. The famously stoic Russian shoppers, and their counterparts throughout the region, simply bore up—stood in long lines, suffered shabby treatment at the hands of shop clerks (who, in turn, had to go out and suffer the same when they did *their* shopping), withstood the disappointment of limited selection of goods and poorly stocked store shelves—and carried on as best they could.

USSQC, its predecessor systems, and the ideology which brought them forth had 70 years in Russia and more than 40 years in the other countries of CMEA to pervade the economic systems in which they were embedded. A system so pervasive over so long a period of time cannot be easily abandoned, even now that the economies have begun a transition to something other than communism. Remnants of the system remain in the mind. The leaders of the former CMEA countries will have to assess the system, identify the parts which contribute to competitive quality, and identify and discard the parts that do not.

QUALITY MANAGEMENT TODAY AND TOMORROW

The Forces at Work. Today, there are numerous forces at work which are sharply changing the course of quality management in central and eastern Europe.

- *Local appearance of Japanese and Western goods:* In newly opened markets, Western products—manufactured goods, foodstuffs, even services—began to appear. They were at first too expensive for most people to afford. But their presence often created a new standard of comparison with local products.

- *Availability for purchase of Japanese and Western goods in the local market place:* With the shift to a market economy, quality standards were determined in the marketplace, not in the committee rooms and laboratories of the standards organizations. Survival of local products required action which would bring quality to levels which are competitive in the world market. The introduction of Western automobiles produced a rapid decline in marketability of those made in the region. For example, when the German Democratic Republic (East Germany) and the Federal Republic of Germany (West Germany) joined, the West German government agreed to exchange East German marks for West German at the rate of one for one. The citizens in the east who had substantial savings were suddenly enriched. Many, attracted by the superior quality of the newly available Western automobiles, bought one. The Trabant and the Wartburg, two mainstays of the East German roads, went out of business.
- *The need and desire to compete at home against Western imports:* Governments in the region know that high import tariffs to protect local industry against these imports can only be a temporary remedy. In the long term, local industry must make competitive products or suffer loss of business.
- *Need and desire to sell high-value goods on the international market:* Governments know that the key to long-term economic health is vigorous participation in the world market. World competition requires products of world-class quality.
- *Joint ventures with international corporations:* Joint ventures are proving to be effective vehicles of technology transfer in market-oriented management, including quality management.

Many successful international corporations, attracted by the market potential and the availability of a well-educated work force at low cost, have been rushing into the region for some years. They have formed local partnerships, joint ventures, and other commercial relationships which involve local people directly with foreign (Western and Asian) quality approaches, standards, and procedures, as well as with foreign goods and services. Such companies as ABB, General Electric, General Motors, Hewlett-Packard, Honda, and Toyota bring more than investment in modern physical plant; they bring business systems, including quality systems, which have been developed over decades, and which have enabled them to create products whose quality ranks among the best in the world.

An example is the introduction of Coca-Cola into Romania, described by Nash (1995). At the end of 1991, 2 years after the overthrow of the Ceacescu regime, Coke had no presence in the country. By 1994, as many as 25,000 kiosks and other small retail shops started or maintained their business because of Coca-Cola. In an interview, an economic advisor to the president of Romania said he viewed the arrival of multinational firms such as Coca-Cola as vehicles for transferring organizational and managerial skills. Coke's decision to develop local suppliers has meant that the manufacturers of bottles, plastic cases, and labels have all begun to experience Western-style quality standards and concepts.

In Moscow, within 5 years of opening in 1990, the McDonald's restaurant on Pushkin Square had become the company's busiest in the world. To achieve this, McDonald's had to develop extensive local supply of ingredients to their standards, and to train an army of servers to the company's service standards. Perhaps more significant in the long run is the emulation of the McDonald's model by another Russian restaurant, Russkoye Bistro, which presents traditional Russian food items in the same format and employing the same quality approach—fresh ingredients and good service at relatively low prices (Specter 1995).

Viewed from the local perspective, involvement in these management systems may be viewed in two ways: as an encroachment on local culture and autonomy to be resisted, or as first steps on the road to competitive quality, an opportunity to be embraced. In fact, there is evidence that each view has its adherents. The most reliable predictor of this is age, older people being likely to resist, younger ones to embrace. The older one was at the time of the shift from the old system to the new, the more difficult was the transition, hence the more likely the case for resistance. (This phenomenon is nothing new or strange, nor is it unique to the case of the change of system being discussed here. Millions of words have been written on the subject of a variety of cultural changes and the indi-

vidual behaviors they stimulated, from agricultural economy to industrial, from manual labor to machine-assisted labor, from manufacturing economy to service, and so on.)

Lorber (1993) tells of being offered advice when he took the post as manager of Hewlett Packard's new office in Prague. He was told to "forget the older people; work with the young ones." "How old is old?" he asked. His friend responded that after the age of 25 it's too late. That seemed a bleak viewpoint, but it is true that younger employees had a far easier time of adjusting to the conditions of the marketplace than those who had made their careers accommodating themselves to a different economic and political structure. The older employees require much help to learn and apply the new concepts.

Total Quality Management, Customers, and Democratic Traditions. The concept of Total Quality Management (TQM) developed in the context of market economics and democratic tradition. In a market-based economy, the identity of the customer can be made clear, and the producer is free to use all means to ascertain (and even to influence) the customer's needs. In a centrally planned economy, decisions as to who is the customer and what are thecustomer's needs are hidden from view. The customer being the very foundation stone of TQM, the formerly planned economies seeking to establish TQM will need to restore respectability to market transactions and the word "customer," and train participants in market business basics.

Democratic tradition affects the flow of information. TQM depends on the free exchange of information within an organization. Lacking an environment which encourages such free exchange, TQM is not achievable. Where the political system discouraged free exchange, its participants must be trained to overcome the habits of guarded exchange.

TQM Criteria—The Ideal. The principal goal of TQM is to attain competitive (or world-class) quality. The criteria of the Malcolm Baldrige National Quality Award provide a widely accepted definition of comprehensive quality management. The Baldrige criteria support a model which includes:

1. Success measured in terms of delighted customers, empowered employees, higher revenue, and lower operating costs
2. Attainment of success through management processes which include quality planning, quality control, and quality improvement
3. Organizational infrastructure on which these processes depend, including a documented quality system, customer-supplier collaboration in partnerships, involvement of everyone in the organization in the quality effort, measurement and information systems for key business variables, and education and training of all in the organization, when and as required
4. A foundation of the quality effort which includes strategic planning and management to the plan, hands-on leadership by top executives, and a focus on customers, their wants, and their needs.

These elements of the Baldrige model provide a framework for assessing an organization's ability to progress toward TQM.

TQM Criteria in Practice

Delighted Customers. In the old regime, the concept of customer was alien, even subversive. Likewise, "consumer" had no currency. In Poland's Popular Encyclopedia of 1982, consumer was defined only in terms of the biological food chain (Lanigan and Bielska 1994). Habits of thought and behavior toward customers (or consumers), leftover from times of the single supplier and chronic shortages, still often reveal themselves in brusque customer treatment.

To delight customers, one must first recognize that customers exist and that commercial success depends on how well the customers are served. Where employees have operated in state monopolies for all of their careers, there is no reason to expect them to behave appropriately when they are suddenly thrust into the open market. This is not so different from the situation in the West, where it is not uncommon for workers who never face an external customer directly, let alone employees who

have no experience with the concept of customer, to believe that they have no customers themselves. This state of belief is one of the first hurdles for organizations to overcome in establishing an approach to quality.

It will be necessary to educate all employees—managers and workers alike—whether they deal directly with external customers or exclusively with internal ones, to view those to whom they supply product and service as customers in the commercial sense, as a means to encourage a sense of partnership in the interest of the ultimate external customer, the one who buys the finished product or service.

In Poland, the author encountered an example that typifies the changes that will come with the shift to market orientation. An assembler of automobile components, a division of a major automobile maker, provides more product for other auto makers than to its parent company. The managing director has gone so far as to separate assembly operations by floor according to customer (which also reduces the probability of confusing one customer's parts for another's), and to identify these areas by prominently displaying each customer's logo on the exterior of the building and in its designated assembly area within the building.

Empowered Employees. In 1994, the director of a Polish factory reported that in the past, each fax message from his plant had required an authorizing management signature. Although he had announced a policy change which eliminated that signature requirement, some employees still climbed the stairs to his fourth floor office to ask for his signature. They were too accustomed to the old rules to feel comfortable ignoring them and adapting themselves to the new ones. Those employees lacked a sense of empowerment.

Employee empowerment means three things. First, that the employee is in a state of self-control, that is, able to know what is expected, know current performance as measured against those expectations, and adjust the process to bring actual performance into line with expectations. Second, the employee is able to make recovery, i.e., has freedom, within limits, to make things right when things go wrong. Third, the employee has the opportunity to participate in planning and improving the work. Key conditions of empowerment are (1) information which is both timely and accurate, (2) trust among the workers and managers, and (3) motivation to act in the interest of quality.

In a visit to a multiplant Polish manufacturing company, in plant visits and classroom meetings, it was common to be asked how to get accurate and timely information—from customers, from suppliers, from workers, from managers. Some groups asked how to get people to tell the truth. From the managers, this had the flavor of getting people to admit error. The workers seemed to suggest they were blamed for things they couldn't control. Questions like these are consistent with the formality of relationship between workers and managers and between layers of management which is, to Western eyes, extreme, and which could only impede the free flow of information within the company. (It is worth noting here that when a group of Polish supplier executives visited a progressively managed factory in Connecticut, they remarked favorably on the informality and apparent ease of communication between managers and workers.)

The questions are also consistent with the history within the company of not sharing information. This failure to share information dates from the communist period, when information was charged with political significance. Where financial information is involved, the situation is compounded by the fact that financial and cost information have never been available in a form that is useful in making decisions in the market setting. Further, there is also a history of punishing people who provided unwelcome information—a practice known in the West as "shooting the messenger." This was common during the time when the survival and promotion of managers was tied to meeting production goals, and when reporting bad news likely implicated the messenger as a barrier to meeting the goals.

As to trust, it has been frequently noted that the history of the past 50 years has seriously eroded trust in the former communist societies. Often enough, this lack of trust is reinforced by the fact that some former Party functionaries still hold positions of influence in companies that are still state-owned.

As to motivation, judging from the frequent questions on the subject directed to the author by employees and managers in Poland, there is a belief that (1) the quality effort will require more work from employees and (2) the employees should receive payment for that extra work. (Our view is that quality is an important part of every employee's job. To separate "quality work" from "normal work" is artificial and will damage the quality effort.)

Developing a remedy for these conditions will take time and patience. The management of such a company (and this one is probably typical) must first be aware of the conditions, recognize the conditions as a problem, recognize and agree on the causes of the problem, and begin setting a strategy to remove the causes. It will take education and, above all, continuous demonstration by the management at all levels that it is not only safe to participate and to share information, but that it is important for the future of the organization and the job security of everyone to do so.

For many companies enduring this transition, employee participation does not fit easily with the traditional management style. But participation is vital if they are to become as effective as they can be. This will require skilled leadership and facilitation as teams are set in motion. There are a number of basic skills in which managers will need to be trained, including finance, motivating people, identifying and valuing customers, sharing information, etc.

Employee empowerment also requires capable processes. In factories, this brings into question the ability of the existing manufacturing technologies to consistently meet the quality goals which they are supposed to meet. The problem of capability became acute in factories which were run for years without updating or even proper maintenance. This was typical throughout the automobile industry in the East.

Reduced Costs and Increased Profits. There is a more fundamental negative effect of inadequate process capability than the effect on potential employee empowerment. It is the effect on the unit cost of product—especially as the result of rework. For example, in the paint shop of one automobile factory, to paint a body in a popular metallic finish required three passes through the paint booth, with an enormous amount of hand rubbing between passes.

In an extreme case, an automobile factory in Yugoslavia was in such disarray that, as a visiting consultant reported to the author, one finished car on the assembly line had wheels loose to casual touch, another had a blue front seat and a brown back one, and all the cars emerging from the paint booth had so much airborne debris in the paint that they "looked like Brillo pads." A shortage of funds—for power lug-nut wrenches, for sufficient inventory of seats, for air filters in the paint drying booth—was offered as the common cause for all of these and other production woes. But the consultant noted that a major contributor was the absence of consistent management and supervision in the plant. In a perverse application of "worker democracy," a work group was always at liberty to replace by majority vote any supervisor with which it disagreed. Any supervisor attempting to improve production in his area became an immediate candidate for replacement. (For these and a variety of other reasons, the company was unable to market a minimally acceptable product. The company slid quietly into industrial history not long after the consultant's visit.)

Getting Started. Providing executive and managerial leadership in this quality effort is a challenge which should not be underestimated. When the transition to a market economy began, there was little experience within these countries in managing for other than production quotas. It is an encouraging sign that many managers show interest in learning what they should do to manage for quality.

If executives and managers agree on the goals on which the Baldrige criteria are based, other elements of the Baldrige model provide guidance as to *what* the organization requires to accomplish those goals—quality processes and adherence to them, infrastructure elements, and the foundation of planning, leadership, and customer focus. The matter of *how* to provide these supporting elements is more difficult. All of these elements are likely to be very different from anything the managers have experienced before, and the foundation of planning, leadership, and customer focus is probably equally novel in their experience. It must be remembered, after all, that even in the Western setting, examples of the companies conducting themselves according to the Baldrige criteria are not so common.

When the transition to a market economy began, these countries had no tradition of relationship with or dependence on a customer. The concept of customer delight and the rest must have seemed meaningless, if not absurd. There was in the West a fair amount of skepticism, if not outright pessimism, about the prospect of rapid change.

Today, there are many hopeful signs that the changes can be made. The experience of Coca Cola and McDonald's, mentioned above, are examples. Milbank (1994) reports rapidly rising exports from the region, especially from Poland, the Czech Republic, and Hungary. This rise in exports is

enabled by dramatic improvements in quality, made possible, in turn, by financial and technical help from Western partners. Three Hungarian companies are presented as examples—a printing and packaging company, a liquor distiller, and a frozen food company—all competing successfully outside their home country.

We have stated, from the customer's viewpoint, some of the things that must change to improve quality and its management in the region. There is growing number of companies that are making those changes happen. Only time will tell how fast the changes proceed and when they will be pervasive enough to put the region as a whole on a secure path to full participation in the world marketplace.

REFERENCES

Behrman, Jack (1998). "In Praise of Maintenance." *The Chapel Hill News,* May 3.

Broad, William J. (1996). "Russian Rockets Get Lift in U.S. From Cautious and Clever Design." *The New York Times,* October 29.

Crossette, Barbara (1995). "Chernobyl Trust Fund Depleted as Problems of Victims Grow." *The New York Times,* November 29.

Egermayer, F. (1988). "Quality in Socialist Countries." *Quality Control Handbook,* 4th ed., J. M. Juran, editor. McGraw-Hill, New York.

Figes, Orlando (1997). *A People's Tragedy: A History of the Russian Revolution.* Viking, New York.

Juran, J. M. (1994). In response to a question at a seminar, December 1994, based on his discussions with industrial managers in Russia during the Soviet period.

Kamm, Henry (1995). "Poland Reawakens to Its History as Communism's Mirror Shatters." *The New York Times,* January 26, 1995.

Khrushchev, Nikita S. (1970). *Khrushchev Remembers.* Little, Brown and Company, Boston.

Lanigan, Edward P., and Bielska, Ewa (1994). "Quality Renaissance in Poland: A True Ethic Shines Through the Tarnished Image." *Proceedings, 38th EOQ Annual Congress,* Lisbon, Portugal. Portuguese Association for Quality, Lisbon.

Lorber, Franz (1993). Remarks during the question period following presentation of "How to Successfully Establish Quality Management in a Start-up Operation." *IMPRO 1993 Conference Proceedings.* Juran Institute, Wilton, CT.

Medvedev, Grigori (1991). *The Truth About Chernobyl* (English translation by Evelyn Rossiter). Basic Books (no city indicated).

Milbank, Dana (1994). "New Competitor: East Europe's Industry Is Raising Its Quality and Taking on West." *The Wall Street Journal,* September 24.

Nash, Nathaniel C. (1995). "Coke's Great Romanian Adventure." *The New York Times,* February 26.

Smith, Hedrick (1976). *The Russians.* Quadrangle/The New York Times Book Co., New York.

Smith, Hedrick (1990). *The New Russians.* Random House, New York.

Specter, Michael (1995). "Borscht and Blini to Go: From Russia's Capitalists, an Answer to McDonald's." *The New York Times,* August 9.