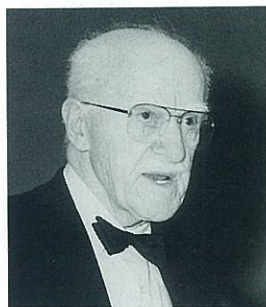


THE EVOLUTION OF JAPANESE LEADERSHIP IN QUALITY

J. M. Juran,
Chairman Emeritus, Juran Institute Inc.



SUMMARY

This paper reviews the events which have contributed to changing the image of Japanese quality from one of shoddiness to one of world leadership.

The review is based largely on the personal experience of the author, who has for four decades been a close observer and a modest participant in the Japanese quality revolution.

EARLY INDICATIONS OF JAPANESE QUALITY

The state of Japanese quality prior to the 1950s has, to my knowledge, not been the subject of an authoritative research. However there is information to be found here and there in various sources: archaeological sites; temples; shrines; museums; writings; etc. From these sources it is possible to draw some useful conclusions.

We know that during the centuries of the Shogunates the artisans occupied a position of respect in the social hierarchy. We know from their surviving products that some of these artisans produced works which were of admirable quality. To this day the works of superior artisans are highly honored. Some artisans are regarded as living national treasures.

We also have access to reports written by the Dutch and Portuguese explorers — the first Westerners to visit and establish settlements in the Japanese islands. These visitors reported that certain Japanese products were superior in quality to anything known in Europe. These products included paper, copper and swords.

The state of quality was quite different with respect to technological products. During the centuries of isolation many such products, though widely used in the West, remained unknown to the Japanese. These products included:

EARLY INDUSTRIALIZATION

In due course the isolation of Japan came to an end. Following the Meiji restoration in 1868, teams were sent to Western countries to study their industries and their social institutions. Western experts were brought in to assist in the industrialization of Japan.

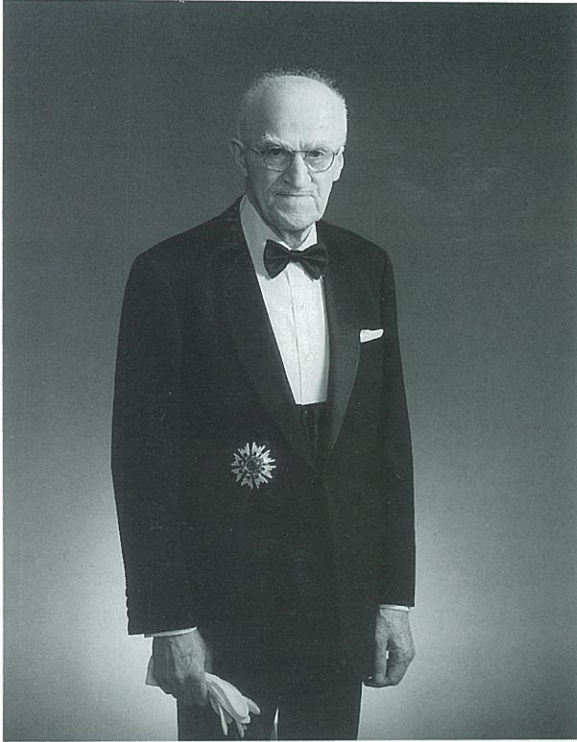
The Meiji government structure also gave much autonomy to the armed services. Those services placed emphasis on building up the military power of Japan. The quality of the military weapons is evident from the results of the battle of Tsushima Strait in 1905. In that battle the Japanese sank 26 of the 29 participating Russian naval vessels. To achieve such a result required weaponry of a competitive quality level.

During World War II the Japanese weapons were also competitive as to quality, and did a lot of damage to their adversaries. (How the Japanese armed services attained such quality for their World War II weapons has to my knowledge not been researched).

Here we have a seeming contradiction. If Japanese weapons were competitive in quality during World War II, why at that same time did the country as a whole have such a poor reputation for quality? I believe the answer is that in the years before World War II, the Japanese were producing both good and poor quality at the same time. The reputation for poor quality came from the civilian goods which Japan was exporting to the West.

(Continued on Page 3)

DR. JURAN'S CONTRIBUTIONS TO JAPAN



The address in the ceremony of the decoration from the Minister of Science and Technology Agency, Mr. Ichiro Nakagawa to Dr. Joseph M. Juran.

Dr. Joseph M. Juran, a citizen of the U. S., is a world-wide leader in Quality Control and we greatly appreciate his achievements.

Dr. Juran has been positively contributing for a long time not only to the development of Quality Control in Japan, but also to the facilitation of the U.S. and Japan friendship.

The Emperor, acknowledging that Dr. Juran's achievements are extremely distinguished Class of the Order of the Sacred Treasure on November 20, 1981, praising his achievements.

I am greatly honored to award the decoration and patent of decoration.

When all is said, I offer best wishes for Dr. Juran's good health and progress for the future, and hope that we will create deeper friendship between the U. S. and Japan from now on.

Guidance in Japan

- 1954 "Planning and Practices in Quality Control"
(Special Lecture for QC Top Management, Hakone, Osaka)
(QC Middle Management Course; Tokyo, Osaka)

- 1960 "Lectures in General Management"
(Management Control Special Seminar, Hakone)
(QC Middle Management Course; Osaka, Tokyo)
(QC Top Management Course, Nara)
"Technological Innovation and New Management"
(Tokyo)

- 1966 "Lectures in General Management"
(Special QC Seminar for Top Management, Hakone)
(QC Middle Management Course, Tokyo)
"Break Through Status Quo in Companies"
(Tokyo, Osaka, Nagoya)
"Leadership and QC Circle"

- 1969 "Quality and Income"
(ICQC' 69, Tokyo)

- 1974 • The QC Symposium for Service Industry
• QC Special Course for Middle Management
• QC Special Course for Top Management
(Tokyo)

- 1978 "International Significance of the QC Circle Movement"
(Special Lecture, ICQCC'78, Tokyo)
"International Cooperation to Solve Quality Problems"
(Keynote Address, ICQC'78, Tokyo)
"Japanese and Western Quality - A Contrast"
(Technical Session, ICQC'78, Tokyo)

- 1981 "Product Quality: The Emerging Western Response"
(Special Lecture, The QC Annual Conference for Top Management)
"Japanese Quality Revolution and Its Western Strategy"
(Symposium sponsored by Nikkei)
"Japanese Quality - Its' Significance of the West and to world Trade"
(Public Lecture, Tokyo)

- 1987 "Managing for Quality - the Critical Variable"
(Special Lecture, ICQC'87 Tokyo)
• international Panel Discussion on Managing for Quality

(Continued from Page 1)

To elaborate, let us notice that under a national policy which favored a military build-up, those companies which make civilian products had difficulty in securing allocation of materials as well as financing. In addition, those companies which engaged in manufacture for export tended to concentrate on labor intensive products in order to take advantage of low Japanese labor rates. It was possible to sell such products at very low prices. However, those companies seldom had knowledge of foreign quality standards. Handicapped by their difficulties, they produced products which failed to satisfy the users. Such failures were widespread and resulted in a widespread perception that Japanese goods were very low in price but very poor in quality. In this way the entire country acquired a reputation for poor quality. The fact that their military goods were competitive in quality was not widely known or understood by the Western public.

THE STATUS IN 1954

A great deal has been written about Japan's post war economic revolution, including the revolution in quality. In this paper I will confine my observations to the revolution in quality, and especially to those aspects which fall within the scope of my personal experience.

My association with Japan began in 1951, with the publication of the first edition of my Quality Control Handbook. It was the first handbook in the field, and it attracted the attention of Mr. Kenichi Koyanagi, then the Managing Director of the Japanese Union of Scientists and Engineers (JUSE). He arranged to have the book translated into Japanese. In addition he invited me to come to Japan to give lectures on managing for quality, and to conduct associated activities.

I was pleased to accept the invitation. I prepared an extensive series of lectures, including special lectures for top managers. I sent these to JUSE for translation into Japanese. My visit was sponsored jointly by JUSE and Keidanren. It took place during July and August of 1954. During those two months I visited about a dozen companies, lectured extensively, and met with various institutions which had interests in product quality.

My most vivid impression from those company visits was the way in which so many of the chairmen of major Japanese companies were personally taking charge of quality. In those days the major companies were still emerging from the ashes of war. They had lost their major customer — the armed services. They were now trying to convert to civilian products. Their finances were severely limited. They also faced severe quality problems such as:

Learning what were the qualities needed by their new Western civilian customers,

Learning how to produce products which met those customer needs, and

Selling their products in the face of a national reputation for poor quality.

The last problem was at that time the worst. Unless the Japanese companies could convince their customers that the product quality was adequate, they would be unable to sell their products, or would be forced to sell based on very low prices, with little or no profit.

Whenever companies have a serious problem of selling their products it is quite usual for the upper managers take charge of solving that problem. Those Japanese chairmen did face a serious problem of selling their products. Much of that problem was due to the poor quality reputation which the Japanese had as a nation. So the upper managers personally took charge of quality in order to change their own company's quality reputation.

I was also impressed by the list of those who attended my lectures. JUSE had organized two-day seminars for upper managers. Each was attended by 70 chairmen, presidents and directors, mainly from leading industrial companies. JUSE also organized two seminars of two weeks each. Each of these seminars was attended by 150 managers in the upper and middle organization levels. I had never before encountered so high a degree of participation by upper level managers.

At the time of that 1954 visit the Japanese had not yet created any training courses on managing for quality — on how to bring quality into the management processes of the companies. So as it turned out, those lectures became the seed courses for training Japanese managers in the processes through which quality is managed.

Those seeds grew rapidly. JUSE had been far-sighted enough to plan for the conduct of follow-on courses. It recruited about a dozen coordinators from the universities and companies to aid in the conduct of my courses. Those coordinators included Professor Kaoru Ishikawa of Tokyo University, and others who in due time became the leading quality specialists in Japan. Those same coordinators designed and conducted the follow-on courses sponsored by JUSE. These follow-on courses include the JUSE QC Middle Management Course, launched in 1955, and the JUSE QC Top Management course launched in 1957. Both of those courses have been updated and conducted many times during the decades which have followed, and they continue to be conducted to this day.

I was also impressed by the training which was then under way for applying statistical tools as an aid to control of quality. This training had received a major impetus from Dr. Deming's 1951 lectures. Nevertheless it was my conclusion that there existed an unbalance. There was overemphasis on the use of

the statistical tools, and underemphasis on making managing for quality a part of the overall process of managing the business. Similarly, there was overemphasis on control and underemphasis on quality improvement. I wrote these conclusions into my report to Keidanren and JUSE. This state of unbalance came as no surprise to me, since at that same time a similar state of unbalance existed in the Western countries. In later years, these same conclusions were confirmed by various Japanese experts — Ishikawa, Kondo, Miyauchi, and others.

My 1954 lectures included stress on the need for continuing quality improvement. I presented numerous case examples of such improvement, including the methodology used and the results achieved. This stress on quality improvement was well received by the Japanese managers. They had independently concluded that continuing quality improvement was needed. They welcomed this confirmation of their views, along with the information on the related methodologies.

THE STATUS IN 1960

I revisited Japan during November and December of 1960. The contrast with 1954 was astonishing. The country was undergoing an immense boom of construction and modernization. Productivity and salaries were rising sharply. An atmosphere of industrial progress was all pervasive.

In the field of quality, activity was also intense. The training programs conducted by companies and by JUSE had grown to massive proportions. The overemphasis on statistical methods had declined. Training in managing for quality had been extended widely to middle and lower levels of management. Training of supervisors had expanded remarkably through courses offered on the national radio as well through company and JUSE courses. The first TV courses had begun. Collectively all that training represented a very large investment in time and money. The Japanese were paying the price, and thereby were becoming the best trained people on earth with respect to managing for quality.

Quality improvements were being made in very large numbers. The resulting success stories were being disseminated through conferences, publications, posters on factory walls, etc. These same success stories also became case examples to be incorporated into the training courses.

There had been other developments. The Deming prize had taken root, and the industrial companies exhibited a keen interest in the concept. The associated publicity was growing and beginning to attract national attention.

An emerging phenomenon of great importance was the growing involvement in quality by the upper managers. This

phenomenon contrasted sharply with the practice in the West, where the upper managers tended to delegate the job of managing for quality to the Quality Departments. Under the emerging Japanese concept, the upper managers were personally taking charge of managing for quality, including conduct of an annual quality audit (sometimes called the President's Audit).

I am often asked: Why it is that so many Japanese upper managers became so extensively involved several decades ago, whereas Western upper managers avoided such personal involvement until the 1980s? My answer is that the Japanese were faced with a widespread quality crisis beginning in the late 1940s, whereas the Western crisis did not become widespread until the late 1970s. In addition, the Japanese crisis was more severe. I believe that the 1990s will see many more Western upper managers taking charge of managing for quality.

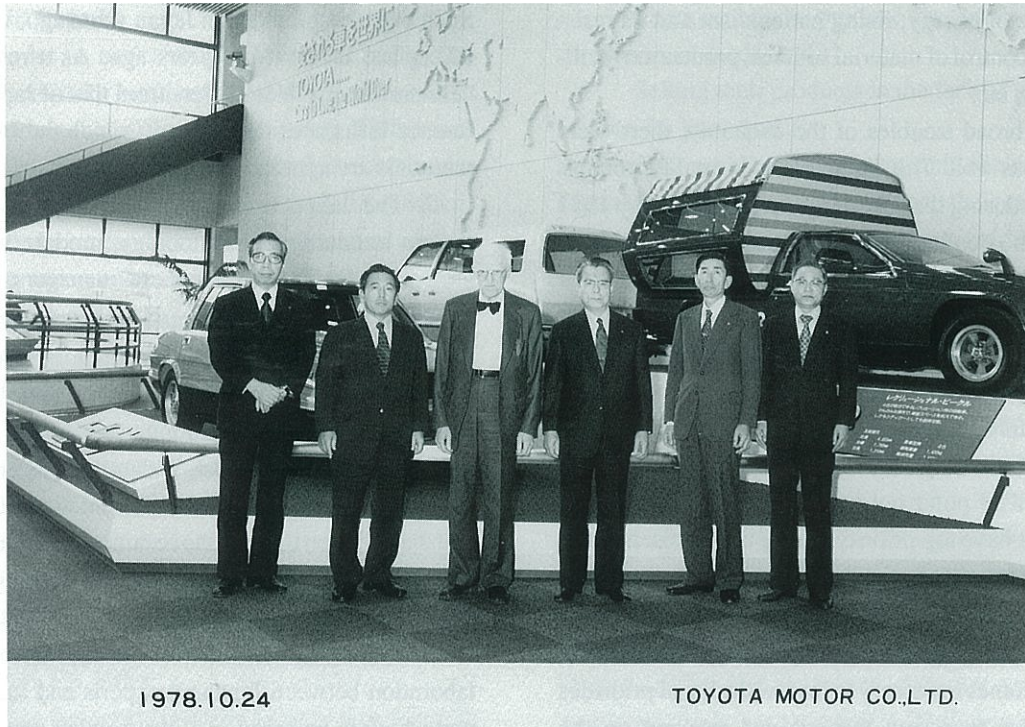
By the end of the 1950s the effect of all those activities was becoming visible in the world market. Foreign importers were learning that Japanese consumer products were becoming acceptable with respect to quality. This growing awareness was in turn slowly changing Japan's quality reputation.

THE DECADE OF THE 1960.

The decade of the 1960s was a golden decade for Japanese progress in quality. By the end of that decade there was clear proof that the quality revolution had been successful. The most striking proof was the rapid rise in Japanese exports, and the impact of these exports, both on the perceptions of customers and on the market shares of competitors.

My visits to Japan during 1966 and 1969, enabled me to see at first hand the events and trends which took place during that remarkable decade. The journal "QC for the Foreman" had been launched and was being published monthly, in very large numbers. It regularly included prize winning case examples of quality improvement, as well as teachings relative to concepts, tools and methodology. It is unfortunate that selections from this and other Japanese journals are not widely available in other languages.

An exciting development of the 1960s was the new concept of QC Circles. This Japanese invention was launched in 1962. It then spread rapidly. It soon generated associated activities such as QC Circle conferences, conventions, international travel teams, etc. I recognized the QC Circle movement as an achievement of great importance, and took active steps to inform the West about it. The first opportunity took place in June 1966, at the European Conference held in Stockholm. I included in my address my observations relative to the QC Circle movement in Japan. There was great interest, but also great doubt that the concept was applicable to Western culture.



Mr. Shoichiro Toyota, The Present President, TOYOTA MOTOR CO., LTD.
(The Left Side of Dr. Juran)

In that same Stockholm conference I offered a sobering prediction of the future of Japanese quality. I hope I will be pardoned if I quote from that prediction:

“The Japanese are headed for world quality leadership, and will attain it in the next two decades, because no one else is moving there at the same pace.”

That prediction, made in 1966, was at the time not taken very seriously by Western managers. Nevertheless I felt quite confident about it. I had seen at first hand some powerful forces which the Japanese had set into motion:

Upper managers taking charge of quality

The entire hierarchy being trained in how to manage for quality

Quality improvements emerging at a revolutionary pace

The QC Circle movement which was providing new opportunities for work force involvement while generating large numbers of quality improvements.

Collateral with their progress in quality, the Japanese made remarkable progress on other fronts. Basic national facilities were built and upgraded dramatically: roads; railroad lines; office buildings; factories; machinery; etc. The factories greatly improved their productivity through adoption of better work methods, mechanization and automation. Marketing skills underwent a corresponding improvement. The shortage of capital gave way to surpluses which were used to

acquire and build foreign sources of materials, foreign markets and foreign sources of production.

The cumulative international impact of all this activity had by the end of the 1960s become evident and even profound. Japanese exports grew rapidly as foreign customers learned that Japanese goods were becoming competitive, and in some product lines, superior in quality.

A fitting climax to the 1960s was the International Conference on Quality Control held in Tokyo in 1969. It was the first such international conference, and I was privileged to be JUSE's honored guest. The Japanese hosts did a memorable job of organizing that conference, which also became a showplace for Japanese achievements in quality. The foreign participants wholeheartedly expressed their admiration.

Looking back on the “golden decade” of the 1960s I can well understand the pride with which the Japanese viewed their quality revolution. It is totally unprecedented in industrial history and has played a vital role in the Japanese postwar recovery. Without the revolution in quality, Japanese products would not have achieved their stunning success in the international marketplace. Let me now turn to the 1970s.

THE DECADE OF THE 1970s

The decade of the 1970s began as a decade of troubles for the industrialized nations, and Japan was no exception. Those troubles were most obvious in the economy as a whole: the

supply and price of energy; rising nationalism and its resistance to foreign control of material sources, production facilities and markets; etc.

Beyond the broad troubles of the economy, there were quality troubles as well. The nature of those quality troubles emerged clearly during the seminars I conducted in my 1974 visit to Japan. The quality problems included:

- The human relations aspects of quality control
- The consumerism movement
- Human safety and environmental protection
- Provision of field service
- Manufacture in foreign countries.
- Improvement of quality in service companies.

It is pertinent to point out here that most of the above problems did not have top priority during the 1950s. In other words, the unsolved quality problems of the 1970s were very different from those of the 1950s. The list of major quality problems keeps changing dramatically, decade after decade. As a result, it becomes necessary to review the list of priorities regularly in order to assure that we are working on the problems of today and tomorrow, and not on the problems of yesterday.

THE DECADE OF THE 1980s

A major phenomenon of the 1980s has been the great growth of Japanese-owned manufacturing facilities within foreign countries. This growth requires solving quality-related problems such as: how to raise the quality of the materials and components purchased from foreign suppliers; how to introduce Japanese ways of managing for quality into foreign cultures; how to achieve harmonious human relations with the personnel in those same foreign cultures. Multinational companies have faced such problems for years, but the Japanese have faced them only recently.

An essential element of manufacturing abroad is training. This involves training the foreign personnel — the workers, the managers, the suppliers — in the Japanese concepts of managing for quality. It also involves adapting the Japanese concepts and methodology to the local culture.

In my opinion these problems of training have not yet been fully solved. One approach has been to translate Japanese training materials into the pertinent foreign language, and then to use Japanese experts to conduct the training. This approach has been exhibiting several deficiencies:

1. The Japanese training materials tend to take for granted the existence of certain conditions which are usually present in major Japanese companies: upper managers in charge of managing for quality; widespread training of managers in how to manage for quality; a revolutionary rate of quality improvement; widespread use of employee participation.

Such events took place in Japan years ago, but they did not take place in the West years ago. As a result, the quality "climate" in the West differs from that of Japan, and this difference influences the extent to which the Japanese training materials are appropriate for the West.

2. The Japanese training materials make wide use of certain standardized terminology, models, and tools which are quite familiar to Japanese managers, but less so to Western managers. In contrast, the Japanese training materials make little use of certain terminology, models, and tools which are well understood by Western managers. All this has an adverse effect on the training process.

3. Many, perhaps most, Western managers prefer a training sequence which starts by presentation of case examples and then goes on to show the common concepts and principles behind those cases. This preference should be considered when developing training materials for Western managers.

In my judgment, solution of these problems requires a collaboration between Japanese experts and local Western experts, both in preparation of the training materials and in the subsequent presentation.

The President's quality audit has achieved continuity in many major Japanese companies. Such continuity has required this audit concept to survive a succession of retirements of company chairmen. Some company chairmen have told me that the most important thing to watch is quality. If the quality is right, then all else will be right. None of the Japanese company chairmen told me that in 1954. They became true believers only after seeing the miracle — the Japanese revolution in quality.

Also during the 1980s, the Japanese experts continued to develop and publish standards for various tools and methods relating to managing for quality. Some of these standards are in the process of being adopted by the West.

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Pre-Convention Seminar on QC Circle



One of the new faces, Speaker from Hungary



Dr. Juran & Mr. M. Imaizumi
Program Chairman, ICQCC'90, Tokyo
(Left), and Mr. Sudomo, Chairman
ICQCC'91, Bali, Indonesia (Right)



Opening Plenary Session



People from
Florida Power & Light Co. (Deming Prize Winner'89, USA)



Farewell Party

NO. OF PARTICIPANTS OF ICQCC'90 (COUNTRIES)

	COUNTRIES	INTL. TQC SEMINAR (Oct. 16-22)	PRE-CONVENTION SEMINAR (Oct. 23)	ICQCC'90 (Oct. 24,25)	POST TOUR (Oct. 27-Nov. 2)
1.	AUSTRALIA	1	1	1	-
2.	CANADA	5	1	-	-
3.	CHILE	-	1	1	-
4.	CHINA	-	1	10	-
5.	CHINA TAIPEI	-	-	38	-
6.	COLOMBIA	1	-	-	-
7.	FRANCE	-	2	2	2
8.	HONG KONG	1	15	54	1
9.	HUNGARY	-	-	1	-
10.	INDIA	1	6	19	-
11.	INDONESIA	9	48	98	4
12.	ITARY	1	2	3	2
13.	KOREA	-	-	40	-
14.	MALAYSIA	1	-	61	-
15.	MEXICO	4	1	18	2
16.	MOROCCO	-	1	-	-
17.	PHILIPPINES	11	-	5	5
18.	PORTUGAL	1	1	-	-
19.	SINGAPORE	1	19	26	2
20.	SOUTH AFRICA	-	-	1	-
21.	SPAIN	-	1	1	1
22.	SRI LANCA	-	-	1	-
23.	SWEDEN	4	-	2	-
24.	THAILAND	-	5	86	2
25.	U.K.	3	6	6	6
26.	U.S.A.	20	2	25	-
27.	U.S.S.R.	-	1	6	-
28.	OTHERS*	-	1	4	-
	TOTAL	64	115	509	27

* Participants Staying in Japan



INTL. TQC SEMINAR



PLANT VISIT
(INTL. TQC SEMINAR)