

IMPROVEMENT OF CORPORATE CHARACTERISTIC BY RETURNING TO THE STARTING POINT

from "Total Quality Control", Vol. 43, Jan. 1992, JUSE



—Would you please tell us your
view on "quality"?

Kawamoto: I think the first
product characteristic required in
a mature society is "quality". In a
mature society, however, it is

believed difficult to appeal to many customers with a single
product characteristic. Then, what are the characteristics that
are satisfactory to a great number of customers? In my
opinion, they are excellence in "quality" and "cost".

Accordingly, it is believed difficult to achieve success in
a mature society unless superiority is maintained in "quality"
and "cost," which represent the starting point. Japan's quality
control is considered to have grown amid a unique corporate
atmosphere and culture. Even so, it has a global nature, and it
is believed to be easily understood by everyone.

We employ a total of 70,000 people in and out of Japan.
Among these employees, 30% are non-Japanese. Also, their
outlooks on life, the world etc., have become diversified. In
order to continue production through cooperation with such
diverse people, it is believed necessary to spread common
ways of thinking, common language, and basic action patterns
throughout the whole company by means of quality control. In
other words, only the basis of QC is considered to lead to good
communications and excellent work.

—We heard that you have introduced TQC.

Kawamoto: In terms of product quality, we are confident
that a certain level has been attained. In the process for

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manufacturing products of that level, we have been striving to
establish a quality control setup. There were employees with
different outlooks on various in non-manufacturing sectors,
and we thought we should study the fundamentals thoroughly
if we are to create an enterprise that is most efficient and that
induces these employees to work jointly, assuredly, and pleas-
antly.

As I have just mentioned, there is the inner corporate
characteristic that we have been building these 43 years.
Therefore, we are now tackling the matter, hoping to learn
whether or not the study of TQC for a return to the starting
point will meet our inner characteristic, while we hope that
TQC will eventually fit our company.

So far, we have been following our own style. From now
on, we would like to study the standards that you have worked
out and utilize them in creating new standards suitable for our
company. ★

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CONTROVERSIAL POINTS OF TOTAL QUALITY CONTROL AS CURRENTLY PRACTICED WITHIN PRIVATE ENTERPRISE

from Deming Prize Winners' Report at the Lecture Meeting

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Regarding Total Quality Control

In his book "Decline and Prosperity" (Kodansha, 1985) Mr. Noboru Makino quoted from a bestseller published by Nikkei Shimbun titled "The Lifespan of a Company" that the average corporate life expectancy is thirty years.

No matter what the enterprise, if it persists in conducting business in line with old-fashioned methods of management, it most certainly will suffer decline sooner or later. This being the case, "What are the solutions for survival and prosperity for a company?" asked the author. And he responded by saying that "the promoting of corporate innovation," that is, management innovation, in every sphere of management, would be the lone salvation.

Japan's introduction to quality control came from the United States soon after the cessation of World War II hostilities. During the decades that followed, the Japanese version on Total Quality Control took form against a background of companies struggling for recovery and survival and handicapped by in-numerable problems demanding resolve. But Japan's own unique version of TQC has emerged as a winner, and it is now drawing the attention of nations all over the world.

Let us, then, briefly review the basic principles of Japanese TQC and its activities which have resulted not only from academic studies and trial-and-error methods of application, but also from sheer desperation on the part of private enterprise.

To introduce and promote TQC may seem like a monumental task, but actually there is nothing special or difficult about it. Essentially TQC helps to promote product sales, services too if that happens to be a firm's line of endeavor, and it provides for a higher degree of customer satisfaction.

In the process of implementing TQC, it stands to reason that both corporate management and its workforce hold their clientele in the utmost esteem and put themselves in the customer's place – the Golden Rule. This may seem easy, but in fact many companies have the ill-advised tendency to produce their wares thinking of themselves first, while neglecting the importance of their clients.

No matter how low the price tags on the goods supplied,

people will avoid buying them if they are of inferior quality. It takes a remarkably long time for an enterprise to build customer confidence in its merchandise, but corporate trust can evanesce overnight when the goods it manufactures fail to measure up to the norm.

The prosperity of an enterprise lies heavily in its belief that there is no substitute for good quality. This being the case, there is no form of TQC that does not address the quality of merchandise or services produced. The bottom line of quality control is having a management group oriented to maintaining TQC, but unluckily far too many directors are inclined to think in terms of immediate profit only.

For the smooth development of an enterprise, it is essential that all departments operate in close harmony with one another under the leadership of top management, and that all see to it that their employees fully apply whatever the predetermined QC methods, while at the same time closely observing critical environmental shifts within the enterprise and within the industry.

To better serve the needs of TQC, many kinds of activities are being developed, such as in areas of policy management, diagnosis by the company president, control points, and QC circles. Two of the most salient features of TQC are that it values the human nature of employees as precious corporate assets, and that it endeavors to foster the talents of persons through their QC activities.

Controversial Points in Private Enterprise

In March 1990 Soshisha, Inc., published in Japanese a book originally titled "Regaining the Productive Edge," (MIT Commission on Industrial Productivity), which translated into Japanese came out as "A comparison of Industries in the US, Japan and Europe for the Rebirth of America." In the work, six basic causes for US industrial degeneration are cited:

- Management strategy woefully out of date
- Shortsighted vision toward the future
- Technical weakness in exploitation and production
- Neglect of human resources
- General lack of cooperation

- Discord between the government and private industry

Generally speaking, there is a clear distinction between American enterprises and their Japanese counterparts when comparing them on the basis of their status quo. However, not all Japanese corporations operate applying the principles of TQC. Conversely, apart from the MIT report, there most certainly are excellent American companies. We have a great deal to learn from "Regaining the Productive Edge."

When surveying TQC activities in Japan, the following questions may be raised.

- Isn't it true that measures such as policy management, diagnosis by the company president, and control points have become mere matters of form, thus reducing TQC activities to little more than a husk of what they once were?
- Is it not a fact that the process of TQC is so greatly emphasized that the objective as originally designated tends to be forgotten? Aren't there too many reports

attesting to the use of the Design Review (DR) method, or to the adoption of this or that QC technique? Have the targets in question actually been attained?

- In problem solving, an ongoing program aimed at improvement naturally is vital. To that end it becomes necessary to rotate the PDCA (Plan, Do, Check, Act) cycle and to compile facts and data. Are these approaches to TQC really enough? Isn't the ability to resolve problems on the wane? And what about cooperation with other departments?
- Aren't QC circle activities at a standstill, or in fact at a lower level than before? Is the spontaneity of circle members based on a let-alone policy, or has it emerged as something compulsory?

In consideration of the foregoing factors, it is believed that many other weaknesses remain in the QC activities of Japanese enterprise. ★

DEMING APPLICATION PRIZE FOR OVERSEAS COMPANIES

SCHEDULE FOR APPLICATION AND EXAMINATION (Revised October 1991)

September:	Finish the revised edition "Deming Prize Guide for Overseas 1992" and mail it to those concerned
By end-October:	Consulting the secretariat concerning application and examination procedures
January 15:	Closing application
Early February:	Notifying acceptance or non-acceptance
End-March:	Closing submission of Descriptions of QC Practices, written explanations of special terms and company business prospectuses
April to May:	Notifying examination of documents and the results, thereof, Deciding and notifying the schedule for on-site inspection and examiners to companies which pass the examination of documents
June:	Meetings for presenting operations sites and preliminary meeting for on-site inspection
July to September:	On-site inspection
Mid-October:	Deciding, notifying and announcing awardees
November:	Prize-giving ceremony and celebration, Lecture meeting for reporting awards

The schedule as given above is subject to change. The deadline or the date of closing submission will be the next Monday if they fall on Sunday.

REPORT FROM THE 11TH QUALITY CONTROL SYMPOSIUM OF SOFTWARE PRODUCTION

by Sumitaka HORIUCHI
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Forward

The 11th Quality Control Symposium of Software Production was held under the auspices of the Union of Japanese Scientists and Engineers on September 12 and 13, 1991, at Kokuyo Hall in Shinagawa, Tokyo.

Featured at the symposium were twenty papers on general technology plus the ever-popular special lecture and the reading of a special paper. This was followed by a panel discussion and tool fair, and seven papers relating to the latter were presented and well received.

To the 11th Symposium were added a tutorial session and an international session. Altogether 549 persons attended, a figure far exceeding the turnout for the preceding 10th Symposium.

Special Lecture

"The New Type of Businessman"

by Takamichi Hatanaka

Managing Director, Fuji Xerox Co., Ltd.

Fuji Xerox was established in 1962, and TQC was introduced to the firm in 1970. As a result Fuji Xerox in 1980 won the Deming Prize.

So as to conform with the indication made at the time of winning the prize to bolster the corporate profit control system, Fuji Xerox adopted the division method, and in 1988 it proclaimed the start of a self-renovation movement called the "New Work Way."

The New Work Way proposes not only visions but also definite measures for reforming the company enabling its taking positive strides toward improvement with the aim of "providing new values to the clients."

According to Mr. Hatanaka, the newly enforced activities also raise the question of enterprise quality as it should be, and he pointed out that enthusiasm among employees eventually will improve quality. Mr. Hatanaka concluded his speech by enumerating what are expected of an enterprise and its individual employees in order to launch such a movement.

Special Announcement

Ms. Rumiko Fujita and Ms. Sachiko Goto, both of the NEC IC MICOM System Co. Ltd., joined in reading a paper treating "Quality Improvement of Software Development in Inexperienced Fields."

They suggested measures that can be taken among inexperienced fields of software programming during the initial stage so as to more quickly find problems and troubleshoot for solutions. It represented a typical instance of TQC, and was

both easy to understand and to the point.

International Session

"European Progress and Initiative in Software Quality"

by Dr. James R. Hemsley
Bramaur, Ltd. (UK)

Dr. Hemsley is one of the leading figures in the European Organization of Quality. He outlined the standardization movement prevailing in Europe regarding software quality and its difficult status, problems and countermeasures.

Tutorial Session

Ms. Hideko Nogi, of the Computer Institute of Japan, Ltd., presented a paper titled "A Guidepost for the Software Structuring of Quality Assurance Model."

The paper was more or less of a field report on the Quality Assurance Model made by Ms. Nogi and members of her group.

It clearly defined the objectives of quality assurance, putting in proper order its relationships with six functions, referred to as quality assurance functions: organization, system, environment, standardization, the human factor, and the business contract.

They also classified each function into from three to five stages to enable quantitative analysis, thus making theirs a most comprehensive assessment model.

Panel Discussion

"Would you like to work as a software technician? Or do you consider it too hard of a job?—Let's give a little thought to their professional life."

Panel Leader Totsuka adroitly proceeded with the discussion, resolving the disputes of his panelists and the difficult aspects of the theme. Mr. Totsuka finally concluded that, although a proper management system had yet to be established, it would be essential to reach a consensus among young people who will become the driving force in the field. He added that it would be important to develop a new system as a means to realize smooth cooperation between labor and management.

Papers on General Technology

The twenty papers presented covered a broad range of aspects such as the CASE tool, reuse design through objected orientation, quality control support systems, quality function deployment, inspection/testing technology, and the training of technicians. ★

REPORT FROM THE 21ST SENSORY INSPECTION SYMPOSIUM “SENSITIVITY AND CULTURE – IN PURSUIT OF RICHNESS”

The 21st Sensory Inspection Symposium was held under the auspices of the Union of Japanese Scientists and Engineers (JUSE) on September 4 and 5, 1991, at Kokuyo Hall in Shinagawa, Tokyo, and some two hundred persons attended.

Sensory inspection is a means of inspection and evaluation using the five human senses, and it is currently being applied in many forms of industry. Of late the method has exceeded its original role of merely “inspecting” both the function and quality of a given product, and has begun attracting public interest as an integrated evaluation method from the standpoint of providing a richer life. Many forms of research concerning sensory inspection are under way with respect to various fields of endeavor.

With the foregoing as its backdrop, the symposium opened, having “Sensitivity and Culture—in Pursuit of Richness” as its main theme. The symposium marked another step forward in seeking the direction that Japanese industries should follow.

The program consisted of a keynote speech, a special lecture, five sessions and a poster session for a total of thirty-five lectures, plus paper readings and discussions.

Keynote Speech

“Research and Development of Products Amicable to the Affluent Consumers, through Sensory Evaluation”-

The address opened with a comparison between Tokyo, supposedly the world’s foremost city from the financial point of view, and Paris, then proceeded to the difference of “richness in life” between urban and rural districts. It referred to the pre-World War II era when people had very little in the realm of personal possessions but plenty of latitude when it came to space. Following keen observation with respect to culture and richness, the speech went on to analyze the current situation and future prospects.

Special Lecture

“A Cognitive Approach to Multimedia Database Systems”

This special lecture introduced from the cognitive viewpoint the accumulation of image information, integrated information, the concept of the multi-media information system equipped with communicative functions, and their respective approaches.

For example, the trademark/design database called “Trademark” and an electronic “gallery” called “Artmuseum” were introduced.

“Trademark” processes design patterns (geometric pic-

tures). When the user draws a rough sketch of a certain image and shows it to the system, the unit automatically retrieves the original or similar image for reference.

“Artmuseum” has an Sketch Retrieval Facility (Quality by Visual Example) which finds the original picture based on a rough sketch by the user. It also has sensory retrieval functions enabling automatic displays of pictures corresponding to the user’s subjective word of impression (bright, for instance). The system is full of suggestions for the possibilities and drift of database systems toward the twenty-first century.

Session I

Sensory Measurement and Sensory Test

This session was held with the objective of applying methods of quality engineering to the measuring of human senses. At the start of the session, Chairman Yano made a speech titled “After Experiencing the Application of Quality Engineering to Measuring Human Senses.” It reported on developments since the preceding year. Four case studies followed the report:

- “Product Development and Sensory Test – Acceptability Test of Product Plant–”
Lion-International Corp.
- “Application of S/N Ratio to Optimize Conditions of Fixing Process for Office Automation Instruments”
Ricoh Co., Ltd.
- “Effects of Vibration having 1/f Fluctuations Pattern on Sleep Onset”
Matsushita Electric Works, Ltd.

Session II

Tutorial Session Report

- “Fundamental Problems of Sensory Evaluation”
Ajinomoto Co., Ltd
- “Sensory Evaluation and Human Information Processing”
Tokiwa University
- “Unidimensional Response of Sensations for Multidimensional Stimuli”
Tokyo Gakugei University
- “The Study of Questionnaire Design and Analysis on Market Research”
Oki Electric Industry Co., Ltd.

Session III

Measuring the Distinctive Character of Human Senses

- “A Study on Measurements of Sensitivity in Automobile”
Nissan Motor Co., Ltd.
- “Sensory Characteristics Measuring for the Impulse Noise of the Engine Valve System”
Toyota Motor Corp.

"What Makes a Character String "Beautiful"?—Methodology of the Balance Evaluation of the Font Design—" IBM Japan, Ltd.

Session IV

Presentation of Case Studies

Basic and applied cases involving sensory testing as experienced by the general public plus the results of research conducted by the Sensory Test Workshop during the preceding year were presented.

"Evaluation of the Lasting of Lip Makeup" Noevia Co., Ltd.

"Studies on Sensory Evaluation Methods of Shampoo" Lion Corp.

"Study of the Fragrance Expression with the Term of Product Category" Kao Corp.

"Preference for Food Colors – The Latest Information and Temporal Change—" Kagawa-ken Meizen Junior College

"A Flavour Terminology of the Liquid Type of Pharmaceutical Products" Taisho Pharmaceutical Co., Ltd.

"Terms on Foods for Sensory Evaluation (Part 1)" Bull-Dog Sauce Co., Ltd.
"Terms on Foods for Sensory Evaluation (Part 2)" Science University of Tokyo

Session VI

Poster Session

"A Study on Relation between Odor Intensity and Sensory Scale" Nissan Motor Co., Ltd.

"Evaluation of Vacuum Cleaner Noise" Toshiba Corp.

"The Study of Sensory Evaluation of Consumer Electric Product –Commercial Films Differences of Evaluation by Products and Man's Ages– Hitachi Ltd.

"Selection of Panelers for Wearing Evaluation of Jackets by S/N Ratio" Bunka Women's University

"Evaluation of Comfortable Riding Portion of Scooter" Yamaha Motor Co., Ltd.

"Evaluation of Taste of Coffee Made by Coffee Makers" Toshiba Corp.

"Statistical Analysis of Finger Tack Test by Minute Accumulating Method" National Research Laboratory of Metrology

"Correlations of Sensory and Instrumental Evaluations of Gel Foods Texture" Otsuma Women's University

"Selection of the Words for Sensory Evaluation and Map of Spices and Herbs" Takasago International Corp.

"Total Evaluation of Feeling for Creams" Taisho Pharmaceutical Co., Ltd.

"Test of Skincolor on Color Television" Toshiba Corp.

Sensitivity and Culture (Session V)

The following four lectures were delivered focusing on the main theme of the symposium "Sensitivity and Culture."

• "General remarks—"KANSEI" and Culture"
The activities of the Sensory Inspection Committee,

which was formed during August 1991, plus those of other groups and individuals engaged in sensory testing were introduced. In addition, observations of contemporary Japan were made from the standpoint of the relationship between sensitivity and culture.

Moreover, it was pointed out that too much emphasis has been placed on the scientific aspect. In the future civilization (based on the study of science) and culture (based on the study of liberal arts) should evolve at the same time.

• Reflection of "KANSEI" in Social Trends

In our contemporary global information-intensive society, the human senses of sight and hearing have become overtaxed. As creatures living and breathing, we somehow must recover balance by greater application of our senses of smell, taste and touch.

Among the five senses, that of smell has the greatest social influence, since it is directly linked with respiration, an activity so vital in maintaining life.

This presentation was to prove that fragrance is now drawing widespread public attention, and at the same time it illustrated the many kinds of merchandise that feature smell as a salient property.

• "Psychology in Developing Cosmetics"

This lecture consisted of an introduction to various types of research being conducted at the Beauty Science Laboratory of Shiseido Co., Ltd.

Under the concept "Beauty and Well-being", Shiseido researchers stressed learning the kinds of products best suited to the sensitivity of consumers, and they attach great importance to the role of psychology in their experiments.

A newly developed system to read heartbeat fluctuations and brain waves was introduced, and the process of developing the company's "Eye Refresh Mask" presented as a case study.

• "Pursue Amenity of Electric Household Appliance –From the View Point of Home Used Air Conditioner–"

The diffusion of air-conditioning was defined as an indication of the people's desire for a better life. The lecture unfolded with methods for assessing indoor environment, descriptions of amenity control systems for air conditioning, and the introduction of actual cases in the pursuit of new kinds of amenities.

The amenity control system is new in that it works to provide comfortable stimuli to the regulation of our body temperature by varying the current of air in a given room, as opposed to the fixed-rate system which has so far prevailed. The new system can produce greater senses of humidity or coolness in lower or higher temperature as compared with ordinary air conditioning, resulting in an energy saving effect at the same time. ★

21ST ALL JAPAN QC CIRCLE CONVENTION

The convention was held at Hibiya Public Hall, Tokyo, on November 5, 1991 and 18 papers selected out of 9 chapters from all over Japan presented their case reports. Among the following papers numbers 11, 13, 15 and 16 had won the Gold Medal.

- (1) Synchronized activities from the heart – self-improvement through learning the pangs of others
 - Synchro Circle, Tochigi Plant
 - Isuzu Motors, Ltd.
- (2) Take advantage of changes! Challenge all changes! We, of Robotan, have grown
 - Robotan Circle, Kokura Second Plant
 - TOTO Co., Ltd.
- (3) Full-time activities in a QC Circle having women both young and old
 - Sankan-oh (triple crown) Circle
 - Kojima Press Industry Co., Ltd.
- (4) Saga of the FCD Hot Circle – developed in harmony by overcoming the generation gap
 - FCD Hot Circle
 - Aisin Seiki Co., Ltd.
- (5) A circle of joy fathered by all through overcoming environmental change
 - Kitsutsuki (woodpecker) Circle, R&D Department
 - Nissan Motor, Co., Ltd.
- (6) Story of the Sawayaka Circle – matured and flowering service
 - Sawayaka (fresh) Circle
 - Asumo Co., Ltd.
- (7) QC Circle activities – a bridge to enterprising men
 - Nojigiku Circle
 - West Japan Railway Company
- (8) Eight year drama of a scratch circle
 - Himawari (sunflower) Circle
 - Nansei Sekiyu K. K.
- (9) Aiming to be first-class men of maintenance
 - Meiko Circle, Murayama Plant
 - Nissan Motor Co., Ltd.
- (10) Target: harmony between man and machine – “families” that continue to progress amid changes
 - Families Circle, Power Distribution Equipment Plant
 - Yaskawa Electric Corporation.
- (11) QC Circle steps of growth: awakening, education, maturity, through communication with the customers
 - SPE Circle, Sannomiya Sales Office, Kobe Branch
 - The Kansai Electric Power Co., Ltd.
- (12) Trail of the Naruhododa Circle – development of the ability to speak by reading data
 - Naruhododa (most certainly) Circle, Shimomatsu Plant, Toyo Kohan Co., Ltd.
- (13) QC Circle activities – do it, and you will achieve it! An obstinate old guy gives spirit! The crystalization of his perseverant efforts!
 - Otchan (old guy) Circle, Matsumoto Plant
 - Fuji Electric Co., Ltd.
- (14) Our reformation system – it blasted our QC Circle activities into orbit
 - The Crunk Boys Circle, Hokkaido Plant
 - Isuzu Motors, Ltd.
- (15) Saga of a Passion Circle – continued growth by contact with both people and facilities from the heart
 - Passion Circle, Anjyo Plant
 - Nippondenso Co., Ltd.
- (16) A sense of keenness through advanced technology – a glittering future among people
 - Advanced technology: the heartthrob of industry
 - Machine Fighters Circle, Yamanashi Plant
 - NEC Corporation
- (17) Hey, Mom, cheer up! The long struggle of a third-rate QC Circle
 - Esper Circle, Akita Plant
 - Atsugi Motor Parts Co., Ltd.
- (18) More QC – don’t stop at the ceiling, reach for the sky!
 - Kanetsu C Circle, Hikari Steel Manufacturing Plant
 - Nippon Steel Corporation

1992 QUALITY MONTH, November

Themes for Quality Month

“QC – the key to a better living”
“Superior work through QC”

Events held during Quality Month

Oct.	30	Quality Control Conference for Consumer (Tokyo)
Nov.	5	Quality Control Conference for Consumer (Osaka)
	5, 6	Quality Control Conference for Service Industries
	10	All Japan QC Circle Convention
	11 to 13	Quality Control Conference for Foreman
	16	Quality Control Conference for Top Management
	16	1992 Deming Prize Awarding Ceremony
	17 to 20	Quality Control Conference for Manager & Staff

*Lecture Meetings are held in 14 local cities.

JUSE INTERNATIONAL SEMINAR ON TQC FOR SENIOR MANAGEMENT

(A) SPANISH / PORTUGUESE COURSE

Date: April 13 to 18, 1992
Venue: Sendai Chamber of Commerce
and Industry

(B) ENGLISH COURSE

Date: September 28
to October 2, 1992
Venue: Hotel Kowaki-en, Hakone

COURSE CONTENTS

- Concepts and Features of TQC
- Role of Top Management
- Techniques for Quality Management and Control
- Quality Assurance of New Product Development
- Quality Assurance at Production (incl. Pre-production)
- Quality Assurance at Sales and Services
- Administration and Promotion Scheme
- QC Circles and Human Resources Development
- Education and Training
- Some Topics on TQC
- Case Study (Visit Deming Prize Winner Company)

More detailed information can be obtained by writing to:

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