

Like Father, Like Son

Looking back at the **Ishikawa family's contributions** to quality's heritage

In 50 Words Or Less

- Ichiro Ishikawa and Kaoru Ishikawa—the father-son quality duo from Japan—made lasting contributions that changed the world of quality.
- Both influenced thought leaders and the quality community and helped establish a foundation for Japanese total quality management, as well as quality thinking and methods worldwide.

THERE'S SOMETHING UNIQUE and special about the contributions the Ishikawa family made to the global quality movement and its advancement in the development and applications of quality thinking and methods.

Kaoru Ishikawa (1915-1989) is universally known and revered within the quality community. Lesser known are the significant contributions made by his father, Ichiro Ishikawa (1885-1970), to the establishment of a modern quality movement in the period after World War II.



• ICHIRO ISHIKAWA •



• KAORU ISHIKAWA •

by Gregory H. Watson

This article provides the history of these contributions by the Ishikawa father and son duo and positions their contributions as important components in establishing a foundation for Japanese total quality management (TQM).

Exceptional father

The Ishikawa family's roots are in Tokyo where Uichiro Ishikawa (1862-1919), father of Ichiro Ishikawa, managed the Kanto Sanso (Kanto Acid and Soda) company.

After Ichiro Ishikawa graduated from the Imperial University of Tokyo and served there as an assistant professor in applied chemistry for several years, he joined his father's company to begin a long management career in the Japanese chemical industry, where he eventually became an industry leader during the war years and served as president of Nissan Chemical Industries and director of the Japanese Association for Chemical Industries.

Following this period, he transitioned into a cross-industry leadership role; first as chairman of the Japan Industrial Association (JIA) in 1946, and then as the first president of the Keidanren (Japanese Federation of Economic Organizations, or JFEO), a position he held from 1948 to 1956.

When the Union of Japanese Scientists and Engineers (JUSE) was established in mid-1946, the executive committee was initially organized with Yoshitomo Tatumi as the founding president. From the start, it was JUSE's intention to maintain a close relationship with industry by inviting a recognized leader to serve as its chairman.

JUSE top management then invited Ichiro Ishikawa to serve as its initial chairman. On July 20, 1947, he met with Kenichi Koyanagi, the first managing director of JUSE (1946-1965), and accepted the nomination. Since the initial installation of Ichiro Ishikawa as the founding JUSE chairman, JUSE has traditionally requested that the chairman of the Keidanren or JFEO serve concurrently as its chairman based on this precedent.

During these pioneering years of JUSE, Ichiro Ishikawa played an important role in convincing senior managers of major Japanese companies to pursue quality as a top-priority strategy for the reconstruction of Japanese industry. In recognition of his lifetime contributions to Japan and its industry, Ichiro Ishikawa was decorated with the Grand Cordon of the Order of the Paulownia Flowers of the Rising Sun by the emperor.

Ichiro Ishikawa's role as JUSE chairman was not merely an honorary position without real responsibility. His focus was to convince Japanese business leaders of their responsibility to pursue quality as a key business objective for the recovery of Japan's economy during the postwar reconstruction years. In many ways, he acted as the *kuroko*, or the player who is dressed in black clothing in Japanese kabuki dramas to facilitate the actions on the stage by the primary actors who are the visible focus of the onlookers.

My belief in Ichiro Ishikawa's role has been deduced through a logical examination of evidence presented through the Deming Prize records.

The effectiveness of Ichiro Ishikawa's interventions and a measure of his influence has been solidified by the fact that he served as the first chairman of the Deming Prize Committee (established in 1951) and at the first Deming Prize Award Ceremony in September 1951. There, the Deming Application Prize was awarded to four major Japanese organizations: Fuji Iron & Steel Co., Showa Denko K.K., Tanabe Seiyaku Co. and Yawata Iron & Steel Co.

KAORU ISHIKAWA

Career milestones



BORN: JULY 13, 1915

1939

Assistant professor, faculty of engineering, University of Tokyo.

1947

Doctorate, department of applied chemistry, faculty of engineering, University of Tokyo.

1960

President, Japanese Society for Quality Control (two-year term).

1974

Professor, faculty of engineering, University of Tokyo.

1976

Professor emeritus, University of Tokyo. Professor, Tokyo University of Science.

President, Musashi Institute of Technology (currently Tokyo City University).

1978 1981

President, International Academy for Quality (IAQ), three-year term.

QC Circle Koryo, General Principle of the QC Circle, QC Circle Headquarters, Union of Japanese Scientists and Engineers (JUSE).

What Is Total Quality Control? The Japanese Way, Prentice Hall Inc.

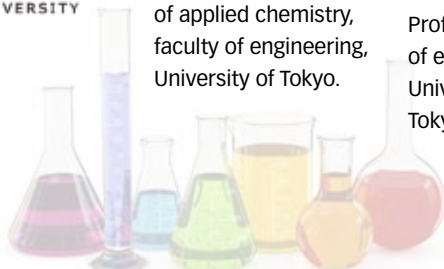
1980

Guide to Quality Control (fourth edition), Asian Productivity Organization.

1982

Books published in English

1985



In the following year, eight additional organizations received this award: Asahi Chemical Co., Furukawa Electric Co., Nippon Electric Co., Shionogi & Co., Shionogi & Co., Takeda Chemical Industries, Toyo Spinning Co. and Kyushu Cloth Industry Co.

During the remainder of Ichiro Ishikawa's tenure as JUSE chairman, three to four organizations received this award each year. Many of these recipients came from the chemical industry, and were major Japanese organizations that you would expect to be active in the Keidanren, or were critical infrastructure industries that were necessary for the reconstruction of a broad-based manufacturing capability for rebuilding the Japanese economy.

In the year following his term as chair, there were no Deming Prize Award recipients. While no strong conclusion can be drawn from this information, it appears that there might have been an "invisible hand" operating behind the scenes that caused company executives to pursue quality in the same way as Adam Smith's invisible hand guides the benefits to the whole of society based on the actions of an individual.¹

Another component of Japan's quality effort was the engagement of top-level executives, which was combined with a strategy adopted by JUSE of providing knowledge and expertise—externally through the lectures by quality gurus W. Edwards Deming and Joseph M. Juran, and through developing internal experts on quality.

Evidence of this strategy to get Japanese thought

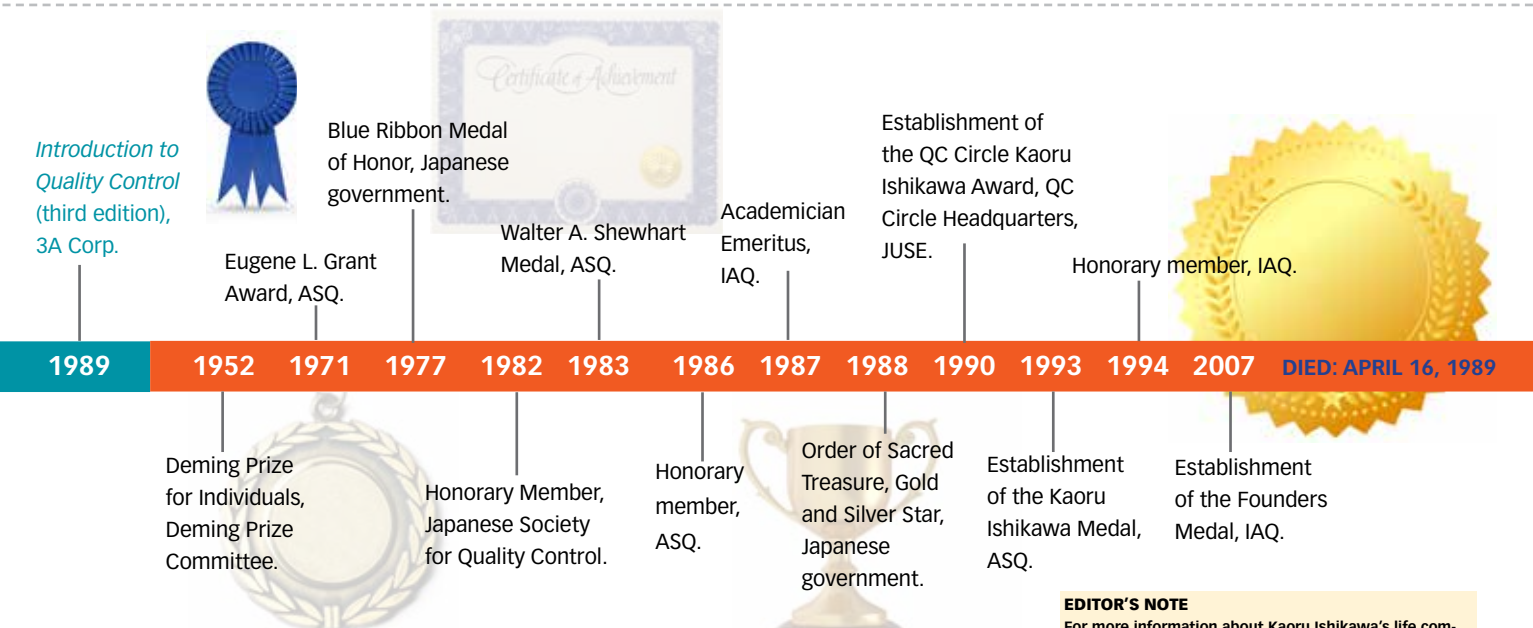
leaders involved in industry and academia is clear when examining the list of individual awardees of the Deming Prize in 1952. Seven members of the JUSE Quality Research Group, chaired by Shigeru Mizuno, were recognized with this award: Tetsuichi Asaka, Kaoru Ishikawa, Masao Kogure, Masao Goto, Hidehiko Higashi, Shin Miura and Eizo Watanabe. Encouraging these individuals, and, in particular, Ichiro Ishikawa's son Kaoru Ishikawa, to dedicate their intellect and energy to developing quality in Japan was an exceptionally important strategy that led to efficient management.

While my arm's length observations of the actual activities of this time are perhaps not totally accurate, it seems there was a strong role for an executive leader of the stature of Ichiro Ishikawa to serve in a persuading way to engage industry and individuals to support Japan's fledgling quality movement. It is clear, however, that the father influenced his son to serve in this capacity. Perhaps, in the future, a researcher will search the JUSE archives to determine the validity of this personal belief.

Exceptional son

I have expressed my deep respect for the contributions of Kaoru Ishikawa in an earlier article² in which I explained how my initial introduction to quality came through the study of his approach to reviewing projects for quality improvement in a series of videos produced by Hewlett-Packard in the early 1980s.

Although I never met him, Kaoru Ishikawa became a



Honors and awards

EDITOR'S NOTE
 For more information about Kaoru Ishikawa's life compared to the parallel development of quality control, see "Postscript: A Parallel Chronology of Dr. Ishikawa's Life and Japan's TQC" at www.juse.or.jp/english/archives/.

virtual mentor to me because I realized how profoundly he shaped how I formulated my own approach to quality consulting. He has greatly advanced the development of quality by managing its transition across generations and across cultures.

Through the development of a collective system of quality—total quality management (TQM) the Japanese way—he demonstrated an appreciation for the

systemic effects of quality and its cultural adaptation by focusing on the core components that are universal elements and may be applied in any industrial concern or cultural context.

Kaoru Ishikawa's professional life was dedicated to developing and guiding the fledgling Japanese quality movement and sharing with the rest of the world the lessons learned during its quality journey.

JAPAN CELEBRATES CENTENNIAL OF KAORU ISHIKAWA'S BIRTHDATE

This year, Kaoru Ishikawa would have turned 100, and Japan is honoring his legacy.

In recognition of this anniversary and to memorialize his lifelong quality career, the Union of Japanese Scientists and Engineers (JUSE) has joined with the Japanese Standards Association (JSA) and the Overseas Human Resources and Industry Development Association (HIDA) and others in a Birth Centenary Commemoration Project. This project is resolved "to preserve and communicate his legacy and exceptional contribution to the quality movement that had substantial impact on the industrial management in Japan and the rest of the world during his illustrious career."

This project has two objectives:

1. Transfer Kaoru Ishikawa's achievements and philosophy to the next generations around the world.
2. Demonstrate how his philosophy, ideas, methods and activities can be effective today and will continue to be relevant tomorrow.

Three major activities are planned this year:

1. The 1993 book *Kaoru Ishikawa—The Man and Quality Control*, published by Keiko Ishikawa, Kaoru Ishikawa's widow, has been translated into English by a number of volunteers and is now available for download at: www.juse.or.jp/english/archives.
2. A new collection of papers about Kaoru Ishikawa will be published electronically on the same JUSE website.
3. A commemorative symposium Sept. 28 at the University of Tokyo to celebrate the centennial anniversary of his birth.

The chairman of the executive committee is Noriaki Kano, Kaoru Ishikawa's principal disciple and an honorary member of ASQ. Serving as vice chairs are Ichiro Kotsuka (Managing Director and Secretary General, JUSE) and Kazuyuki Suzuki (past President of the Japanese Society for Quality Control).

In addition, many Japanese business leaders and former students of Kaoru Ishikawa are members of the organizing com-

mittees, along with the three non-Japanese recipients of the W. Edwards Deming Distinguished Service Award for Dissemination and Promotion of Japanese Total Quality Management (overseas): Janak Mehta (India), Kan Trakulhoon (Thailand) and the author of this article (United States and Finland), who was the first recipient of this award.

Some of Kaoru Ishikawa's accomplishments include:

- Founding the Japanese Society for Quality Control (JSQC) in 1970 with Shigeru Mizuno and Tetsuichi Asaka with Yasusaburo Hara as its first president.
- Establishing JUSE and JSQC programs for the Deming Prize, three monthly academic journals on quality, and various quality conferences and symposiums, which continue to be conducted.
- Founding the International Academy for Quality with Armand V. Feigenbaum (United States) and Walter A. Masing (Germany).
- Organizing international activities for quality circles (QC). He is known as the father of the QC.

Kaoru Ishikawa served as the leader of overseas QC study teams of Japanese executives and contributed to international cooperation in quality control under the sponsorship of various Japanese organizations.

He visited China, Taiwan, Korea, Thailand, India, the United States, Czechoslovakia, Finland, France, Sweden, Switzerland, Brazil and the United Kingdom to conduct seminars and conferences to transfer Japanese TQM to other countries. He wrote 31 books and more than 600 papers on various topics related to quality. —G.H.W.

EDITOR'S NOTE

For more information about Kaoru Ishikawa's teachings, see these ASQ open-access articles:

Kondo, Yoshio, "Kaoru Ishikawa: What He Thought and Achieved, a Basis for Further Research," *Quality Management Journal*, July 1994, pp. 86-91. http://asq.org/data/subscriptions/qmj_open/1994/july/qmjv114kondo.pdf.

Watson, Gregory H., "The Legacy of Ishikawa," *Quality Progress*, April 2004, pp. 54-57, <http://asq.org/data/subscriptions/qp/2004/0404/qp0404watson.html>.

Furthermore, through his own writings and publications and through the research that he encouraged others to pursue, Kaoru Ishikawa assured that learnings from Japan would be transferred to the West because the Japanese TQM research and study committees of the 1980s translated their final reports into English to share with the rest of the world.

Collaborative leadership

It also is clear that Kaoru Ishikawa was not solely responsible for all of these results. Early development of quality in Japan was indeed a collaborative effort. The founding generation of Japanese quality thought leaders included three men who served as prime movers within the early Japanese quality community: Shigeru Mizuno, Tetsuichi Asaka and Kaoru Ishikawa.

Shigeru Mizuno led the initial Quality Research Group, which interpreted the words of Deming and Juran to help structure a uniquely Japanese approach to companywide quality control.

Tetsuichi Asaka served as a consultant and quality coach who guided Japanese industry leaders and their companies in a disciplined approach to quality.

Kaoru Ishikawa contributed to the development of quality methods and shaped the formal structure of Japanese quality infrastructure through his leadership in JUSE and development of a national and global structure for the encouragement and promotion of Quality Control (QC) Circle activities.

Kaoru Ishikawa became Japan's representation when speaking about quality through his international activities and by interpreting the Japanese total quality philosophy, tools, methods, success stories and case studies.

His achievements in global quality consulting, backed by the exceptional performance of Japanese companies that were supported by his national quality colleagues, created Japan's strong reputation for quality performance.

This collaborative approach to quality has served Japan well. Clearly, the pivotal role in the global dissemination of Japanese quality was the key personal contribution of Kaoru Ishikawa.

The ongoing legacy

New science is built on the contributions of past scientists. The same is true in the global quality movement. What is the responsibility of one generation for the next? This question is a focus that is inherent in the Shinto

faith. In this tradition, each person should leave the world a better place as a way of honoring the wisdom that has been gathered by ancestors, by passing on and preserving this knowledge for future generations.

Each person will contribute to the continual cultivation and nurturing of this knowledge to create an evermore refined state of being. The responsibility of each of us is to leave the world a better place as a result of our experience as humans. Perhaps this implicit cultural mindset of Japanese thinking is best described in a guiding precept of Japanese business:

“Contribute to developing the welfare of the country by working together, regardless of position, in faithfully fulfilling your personal duty and show gratitude for the contributions of others in things that are both great and small; in both thought and deed. In such a system of living, the responsibility of each generation is to develop the following generation so that it is capable of fulfilling its own responsibility and extending the tradition of learning and doing.”

This was accomplished by Kaoru Ishikawa because he was a mentor for a second generation of Japanese quality thought leaders: Yoshio Kondo, Takanori Yoneyama and Genichi Taguchi. The current generation of Japanese quality thought leaders also have been his disciples, students or colleagues. They include Hitoshi Kume, Noriaki Kano, Shoji Shiba and Yoji Akao.

In this way, from one generation to the next, the Ishikawa family contribution has enriched the global quality community and, in turn, improved the quality of life for much of humanity.

Exceptional father, exceptional son: Quality professionals remember your contributions and thank you with deep gratitude for your gifts to our current knowledge and capability, which would not have been achieved without your diligent efforts. To paraphrase Isaac Newton, “If we have been able to see further, it is because we have stood on the shoulders of giants.” **QP**

REFERENCES

1. Adam Smith, *The Wealth of Nations*, 1776.
2. Gregory H. Watson, “The Legacy of Ishikawa,” *Quality Progress*, April 2004, pp. 54-57.



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