

## **Chapter 5**

### **Prof. Ishikawa, A Collage**

#### 5.1 Golf

#### **“Golf is Intuition, not QC”**

Ryoichi Kawai

I had a close relationship with Dr. Ishikawa for more than fifty years, both in formal and informal situations. At first, I had got along well with him as a friend in high school (a post-secondary school established under the former educational system) and after graduation, as one of his students of quality control. Those days are filled with happy memories as I had many opportunities to see his warm personality.

It has already been thirty years since our company was exposed to foreign competition for the first time, and our survival was at stake then. We decided to introduce QC to overcome the crisis and sincerely asked Dr. Ishikawa for his support. Although his schedule was quite tight even 6 months in advance, he kindly agreed to help us on the condition that I would go along with him wherever he would go for counseling to any of our plants or sales offices. I promised I would, and our request was accepted by him.

It was really hard for me to keep the promise. However, I found that I could get live information and understand the real situation by frequently visiting the workplaces along with him. Since this information was a little different from what I learned from the reports made by senior managers, it was really an amazing learning experience for me. This is an extremely important point to make correct management decisions.

I learned how top management must decide and act. Furthermore, whenever he visited, he always enthusiastically pointed out how unscientifically and irrationally we were working. On the other hand, he talked about the good aspects of our company when he talked outside the company. When we heard about it, we were encouraged by knowing that we were doing good things. This episode reminds me of his warm personality.

One day, he and I went to Hakone to play golf. Since he was always much superior

than us in his teaching, I thought it was a good opportunity to show him that I was a better player because I had more experience. However, maybe because of the pressure I put on myself, I sliced the ball to the left and to the right. My score went from bad to worse and I could not show him that I was a model player. Dr. Ishikawa's ball also sliced to the right and the left more than mine, however, it seemed that he truly enjoyed the freedom he got at the course. When I made fun of him by saying that "Your golfing is completely not a QC style," he replied innocently that "Golfing is intuition, not QC." I suppose even the world authority on QC could not apply his expertise to the golfing.

Thirty years have passed from those days, our company has now grown as a global company. I will never forget his enthusiastic and devotional guidance that led to our growth.

I am truly sorry that Dr. Ishikawa, who had such a strong passion and devotion to the industrial world, has passed away. Now I commit again that we will take on his will and desire and continue to make efforts for the further development of Japanese industry.

(Chairman of the Board, Komatsu Ltd.)

## **Prof. Kaoru Ishikawa, A Great Leader**

Mahito Uchiyama

QCG is a compound word for QC and GOLF, which describes the golf competition which has been held since 1959 for about 30 years consecutively, under the initiative of Prof. Ishikawa and organized by the executives of the companies that received the Deming Prize. I joined the competition in 1981 after receiving the Prize. Thanks to the competition, I made a lot of QC friends (every friend was a company executive) as time passed, and I could enjoy myself participating in various QC meetings ever after. If I had not joined the QCG, I would have driven myself away from QC after my retirement from the job. I cannot help but feel that the reason why QC is still living in my life is largely due to the friendships built through the QCG. Dr. Ishikawa cherished the QCG aiming to spread those friendship feeling which I am now holding in my mind.

How can I forget it. It was February 25th, 1989, this day of the QCG was stormy since the morning, a very bad weather condition. Dr. Ishikawa suddenly showed up at the party held after the golf play. He had rested for about a year because of his illness. Everyone was exalted, toasted with cheers and had great fun. That became the last QCG for Dr. Ishikawa, as 50 days after the party, he departed.

Among the achievements made by Dr. Ishikawa, the QC Circle casts the brightest

light. I served as the leader of the Kanto branch, and attended many regional QC Circle conferences. I was very impressed to see that young participants from member companies organized conferences with concerted efforts in close harmony, and that they were presenting the results of their efforts while building friendships. I wonder if we could have manufactured the world's pre-eminent Japanese industrial products without QC Circle activities. I can never forget Dr. Ishikawa's noble figure, standing on the podium with his sick body, coaching and encouraging us to his last year.

I would have to describe Dr. Ishikawa as a really great leader. He vigorously worked to develop QC by encouraging the unity of those aiming to study QC for a common purpose, through two unique activities, QCG and QC Circle, though the two are different of forms. (Advisor of JUKI CORPORATION)

## **A Hole in One**

Akira Ishikawa

My father made his hole in one in the 156th QCG (QC Group) (JSA Cup Tournament) on June 15, 1985. It was at 1:30 p.m. at the 14th hole at Tomei Gotenba Country Club. The hole is 131-meters long and he used a 7 wood club (Daiwa Uni Carbon. The ball was a Lexter AD No.4. Emiko Saito was their caddy. His playing partners were: Mr. Setsuro Sekiya (Toyota Automobile Co.), Mr. Katsuhiko Irino (Kashima Kensetsu), and Ms. Haruko Mitsuaki (JUSE Press). (See below)

My father started his golf in 1957, at the age of 44. True to his character, he took data of his practice (it is doubtful whether it was useful), but I remember well that he practiced in the backyard net until it got dark. Thanks to the hard practice, his handicap improved quite a bit from 1959 to 1965. His handicap at QCG was 36 in 1959. He got down to 19 at Takasaka C.C in 1965. 19 was his best handicap in his golf history when he was 50 years old, six years after he had started his golf. He overcame his unique swing by hard practice. From age 50 to 60, he did not miss a single QCG Tournament. After each tournament, he took pleasure at home in recording the day's score, other players' new handicaps, etc. He made me help him in the work when I was in university.

When he was 60, he became gravely ill, and after the operation he was cautious and did not play much golf for 2 to 3 years. He had a weak lung and a towel was essential whenever he played golf in the hot weather. As he got older, he would often walk with a golf club as a walking stick. From around 1984, he started to play in the cold weather because of his condition. In the summer time, he played only at Karuizawa,

and even Karuizawa he had to wipe off his sweats frequently. Those of you who played with him will remember drops of sweat falling off when he squeezed and twisted his towel.

His hole in one ball was placed in his coffin when he passed away. Perhaps, he may be talking proudly about his hole in one in the heaven.

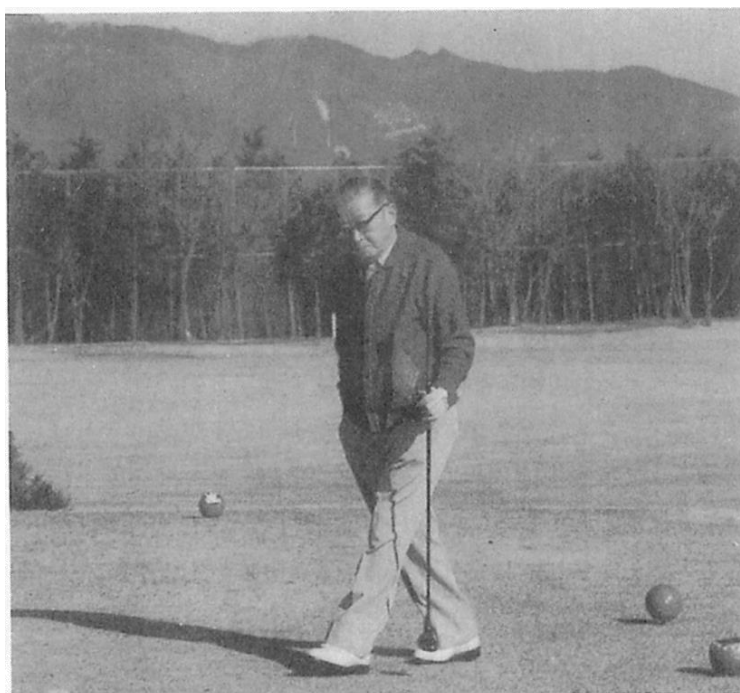
(Second son, President of Aim Co.)

BENT GREEN									
Competition 156回 (JSA杯) GCG					Round				
HOLE NO	HCP	BACK TEE	PAR	REGUL TEE	石	田	入	光	
1	3	498	5	483	5	1	8	5	11
2	1	405	4	383	6	1	6	9	8
3	5	492	5	477	8	2	5	5	8
4	7	380	4	365	5	1	5	10	7
5	13	321	4	301	6	2	4	6	13
6	17	297	4	282	6	3	6	6	6
7	15	150	3	138	4	2	4	5	6
8	11	186	3	166	5	2	4	4	7
9	9	350	4	332	4	3	3	7	7
OUT		3.079	36	2.927	53	17	47	58	23
(自筆) Competitor 石 田 入 光					Round				
(印) Attested by 東名 街 庭 球 カントリー クラブ					M T S 年 月 日				
(日付) Date 1985年 6月 15日 12時 30分					HOLE NO HCP BACK TEE PAR REGUL TEE 石 田 入 光				
10	8	330	4	308	7	3	4	5	8
11	6	342	4	332	5	1	5	6	14
12	2	338	4	322	7	3	5	7	8
13	10	323	4	323	6	2	4	6	9
14	14	145	3	131	10	2	4	6	
15	12	296	4	279	10	2	7	8	11
16	18	118	3	104	6	2	2	3	6
17	16	302	4	287	7	2	4	6	14
18	4	495	5	461	7	3	6	9	8
IN		2.689	35	2.547	58	40	54	59	
OUT		3.079	36	2.927					
TOTAL		5.768	71	5.474					
HANDICAP Hole in One					NET				

**His score of the hole in one play:** His scores for the 4 holes (total par 16) before the hole in one was 25 or 9 strokes over. For the 4 holes (total par 16) after the hole in one was 32 or 16 strokes over. Father was perhaps unstable as he was excited over the hole in one.

**Improvement of Dr. Ishikawa's Golf Handicap**

QCG Handy				Official Handicap		
1959.	Feb.	1st	36	1959.	Dec.	31 Fuchu C. C.
	Feb.		34	1960.	Jan.	30 Musashi C. C.
	March	28th	32		May. 7th	30 Fuchu C. C.
	July	20th	26	1961.	May. 18th	27 Musashi C. C.
1960.	Jan.	22nd	21		↓	
	July	28th	19		Aug. 8th	23
	Dec.	30th	17			(+3)
1961.	April	15th	14	1962.	Dec.	26 Musashi C. C.
	June	16th	13			
			(+6)			
	Dec.	1st	19			
1962.			17	63.	Nov.	25 Fuchu C. C.
1964.			15	64.	July	21 Old-Karuizawa C. C.
1965.			12	65.	Nov.	19 Kosaka C. C.



**Dr. Ishikawa enjoys playing golf at Karuizawa (Jan. 1983)**

## **Dr. Ishikawa's Control Graph of Golf**

Tadakazu Okuno

We all know that Dr. Ishikawa was fond of collecting and recording almost everything. One example was his golf score (shown in the graph below). As he played golf 35 times a year until around 1970, he kept records of the score of each hole by putting a mark on a control chart. Since there are three kinds of hole; par-3 hole, par-4 hole and par-5 hole, it does not make any sense to put a mark for the score itself. So, he decided to put a mark for how many strokes over par as a characteristic value (Figure 1). If the value was zero, it means he finished on par, whereas, two plus means a double bogey. Unfortunately, there were only a few good scores of birdie (minus one). But let me emphasize that, to his credit, he was the only one person who achieved a hole in one in thirty years of the QC Golf Competition (QCG).

The recordings in the following graph started in 1957 and ended in 1968, consisting of 18 folded sheets. I have heard that every time he returned home after golfing, he kept such records. I guess after 1968, he must have been too busy to keep doing it.

Figure 1 was summarized in figure 2 on another page. The black dot ● represents the average number of over strokes per hole in every nine holes, while x represents the number of putts at the time. He began golfing between 1957 and 1958. By comparing these two graphs, we can see that the results varied considerably and the scores were not very good at first. But in less than ten years, the scores improved a lot and stayed at an average of 2 over and no more than 4 over. Although he always told us that “Golf is not QC, we should enjoy the variance of scores,” he actually managed his golf scores by using QC methods. I really admire him in this regard too.

(Director and Professor, Science University of Tokyo,  
Faculty of Engineering, Department of Management Science)

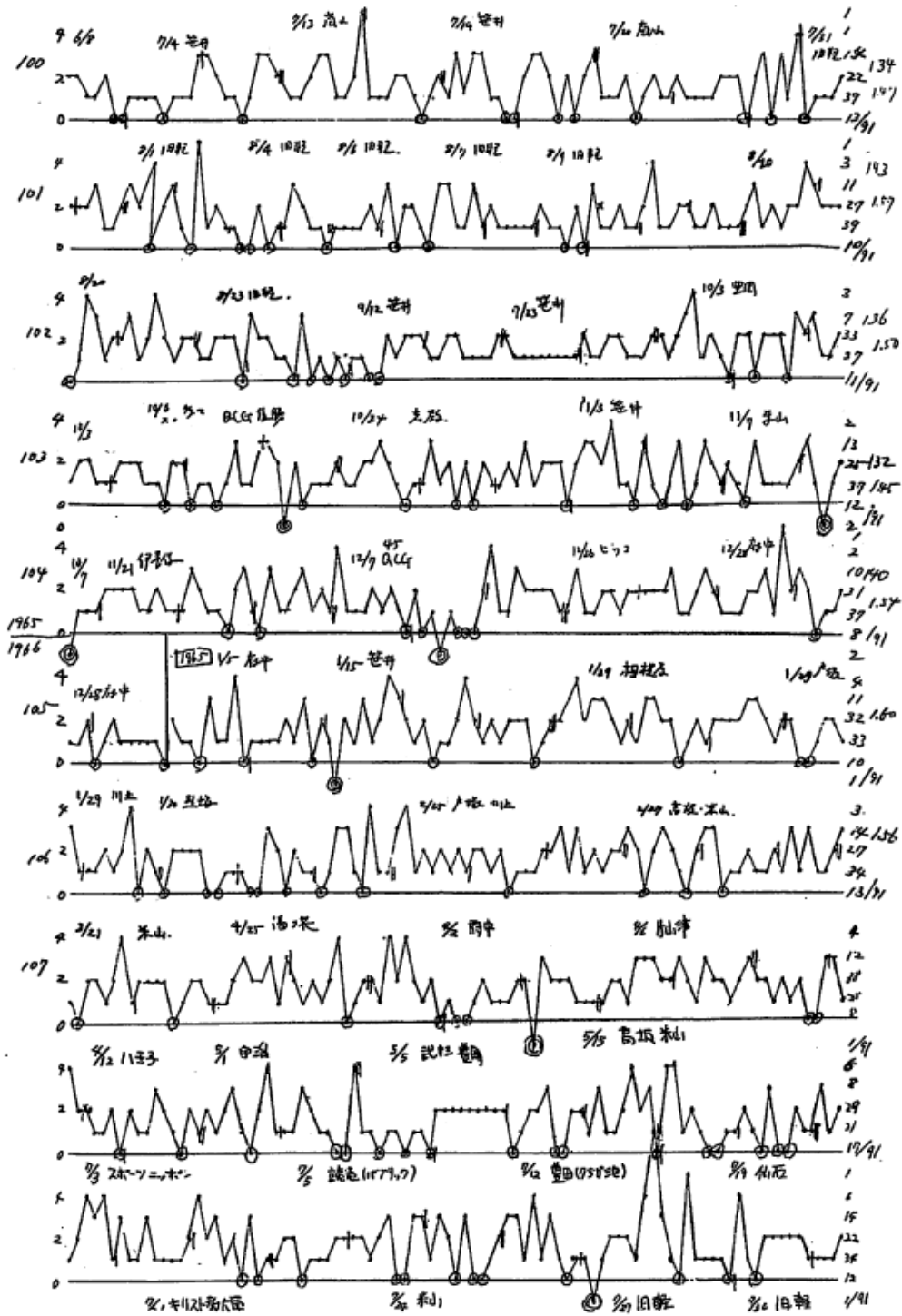


Figure 1 Over-stroke number in each hole (1965–1966)  
 (He played 18 or 27 holes each time.)

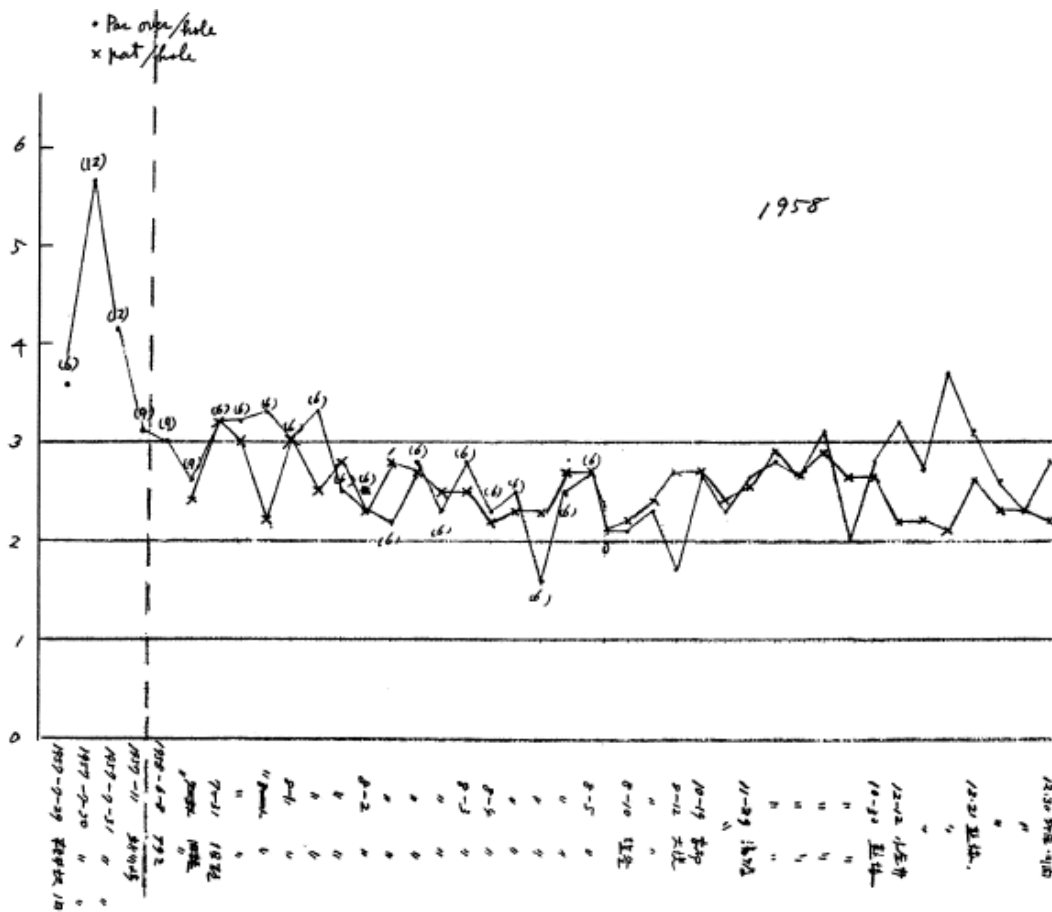


Figure 2-1 Average of over-stroke and putting number (1957–1958)

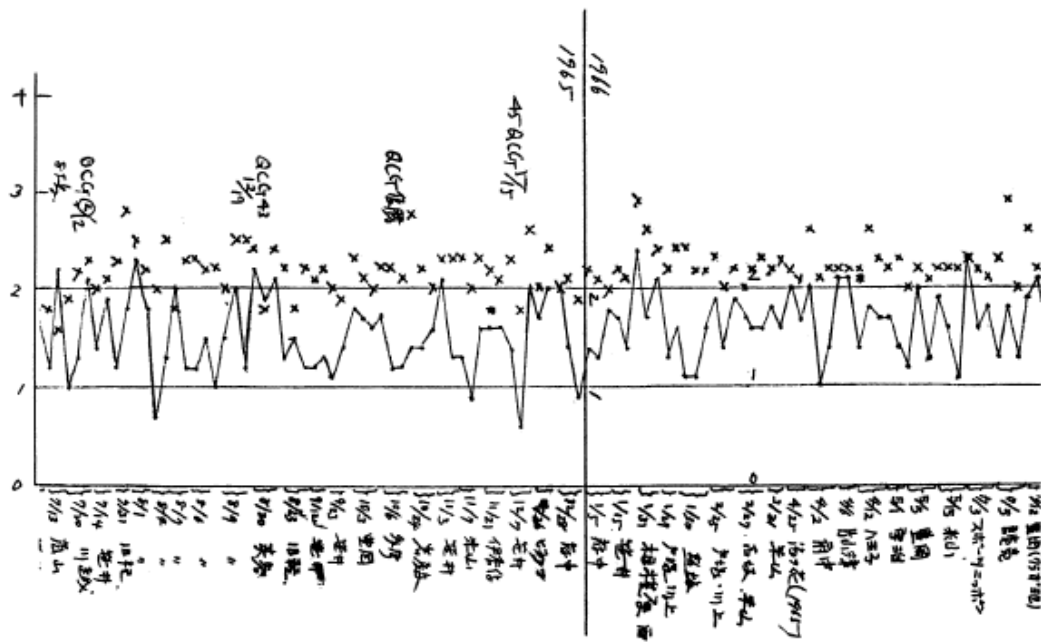


Figure 2-2 Average of over-stroke and putting number (1965–1966)



## 5.2 “*Nomunication*” and its Origin

A portmanteau of the English word “communication” and the Japanese word “*nomu*” (meaning “to drink”), “*nomunication*” is a neologism that was coined by Mr. Anthony Hoon, a participant from Singapore in the 1978 UN Course on Quality Control in Industrial Goods organized by the United Nations Industrial Development Organization (UNIDO) and conducted by the Association for Overseas Technical Scholarship (AOTS), for which Professor Ishikawa was the principal lecturer.

Mr. Hoon, who at that time worked for Yokogawa Electric Singapore and could understand Japanese, came up with this word to signify the communication that took place amongst colleagues drinking together after work at night at a casual bar. During his internship at Sankyo Seiki Manufacturing in Suwa, he was surprised to discover that almost all conversations were related to their work; not only that, but these gatherings were paid by the participants themselves rather than by their company. He argued that this *nomunication* was the very cornerstone of Japanese management culture. Professor Ishikawa came to hear about this, and became extremely fond of the term, spreading it throughout Japan.

### **“Mr. Ishikawa, It’s Five O’clock”**

Takenori Sumida

Around the time that we moved to the University of Tokyo’s Hongo campus, in Japan the introduction of petrochemical technology has been introduced and all chemical companies were establishing central research institutes focused on KNOW-WHY rather than KNOW-HOW. Keeping with this trend, the number of students at the University of Tokyo’s Department of Applied Chemistry was doubled and it was restructured to create four departments.

The rate of advancement to graduate school was also surging at this time and five of us from the same class, who had completed our graduation theses at Professor Ishikawa’s laboratory, joined the master’s course program. Among the fourth-year undergraduates and first-and second-year of the master course students, there was quite an array of talent. The person keeping this rabble in line was a doctoral in charge of candidate. Mr. Kume, better known these days as Professor Kume, who is now the successor of Professor Ishikawa’s laboratory. Looking back now, Professor Ishikawa at that time was an up and coming professor who had only recently left Professor Shingo

Ando's laboratory to form his own laboratory, and young people were quite astonished by his vitality and energetic approach to work. Educating the business community on quality control and its promotion at the Union of Japanese Scientists and Engineers (JUSE) was one of his key roles, and he would always co-opt students to help with this so that through these experiences students would understand what quality control really was.

He made us work as note-takers and lecturers at seminars, as well as compiling questions and textbooks, and participating in workplaces and training courses, which were frequently held at luxurious hotels in Izu and Hakone. We, students, had too much luxurious experience in those days. On those occasions, a banquet would customarily take place in the evening with all the lecturers in attendance. I remember that they all seemed to be able to hold their alcohol very well. Professor Ishikawa was no exception. In case of Japanese *Sake*, he couldn't wait a banquet before he let somebody prepare a glass and filled it to the brim from a *Sake* bottle before a banquet. As his glass emptied, he would smilingly accept everyone's offers to refill it, time and again, without stopping.

As the party got into its swing, various groups would form here and there in the large banquet hall, engaged in heated discussion, and you would always find Professor Ishikawa at the very center of the largest group, speaking in the loudest voice. As the night wore on, and people began to drift back to their rooms in ones and twos, the Professor would invariably invite all of the students back to his room, where he would take a bottle of Torys whisky out of his beloved bulging briefcase and the discussion would continue until that bottle was empty. At that time, Takeshi Kaiko's slogan "Let's drink Torys and go to Hawaii" was a big hit. On one occasion, the students in the year before me were invited to the Professor's home for dinner and he played a trick on them, serving them Torys from a Johnnie Walker bottle. Johnnie Walker was a real luxury item in those days, so, unaware of the substitution, they were really impressed. Anyway, I could never did find out whether it was actually Torys in the bottle. This incident with the favorably received imitation whiskey became a perfect anecdote that the Professor would recount during his lectures on quality control, when talking about the section on sensory evaluation.

As the alcohol flowed and Professor Ishikawa became more relaxed, he would address us with the familiar second-person pronoun "*kisama*" and talk passionately about how to research, how to prepare for work, and, in particular, we should use our superiors after joining a company. Occasionally, a question from a student would lead him to open up about how popular he was with geisha in his youth, when he was in the

Navy. One story that the Professor loved to recount was the tale of “Mr. Ishikawa, it’s five o’clock.” He told us that even if he and his companions had drunk themselves into a stupor while drinking out with geisha, the girls would always come around the next morning to their windows to wake them up, so that they would not be late for the morning roll call. I think he wanted to boast about how popular with women he and his group of comrades had been in their youth.

Although I mentioned the story of whisky first, Professor invited everyone from his laboratory to his home in Chofu at every New Year. We would enjoy many tasty dishes prepared by his wife who took over Ishikawa’s family customs, which treating the visitors with home cooking. The Ishikawa farm stretched from just beside Tobitakyu Station and I seem to recall that they lived in the main house with a thatched roof which was quite rare even in those days, I remember their children would join in our chatter; his daughter was a talented pianist and would play the piano for us, while Mr. Kume surprised us by playing Schubert’s Heidenröslein. One day, Professor Ishikawa showed us a memorial album of his trip to the United States. We were amazed to see picture postcards that were sent to his wife every day from just the day he arrived at the United States until the day he left. The Professor bashfully said that a picture postcard was more convenient than a diary. I discovered a new side of his openhearted nature.

(Bachelor’s degree, 1964; master’s degree, 1966)

### 5.3 Heavy Smoker

## **Prof. Ishikawa’s Chuckle**

Yoshihisa Nagaoka

On Saturday, April 16, 1988, Tokyo Electric Power Company’s TQC Promotion Steering Committee, popularly known as SteCom, was held in a hotel in downtown Tokyo.

During that time of year, the cherry blossoms in Kudan were in full bloom as usual. However, I was the QC Promotion Office Manager at that time, so I fully stretched and was on the verge of brain-death.

I had already received the news that Prof. Ishikawa suddenly had been hospitalized. He had been performing a guiding role for a big-shot instructors and lecturers, so I was at the crossroad on whether to hold or not SteCom. At 1:20 in the afternoon of the day before the event, Prof. Ishikawa called me personally from the patient room of S

Hospital, and told me to hold the meeting as scheduled. I felt much relieved to hear the news, but at the same time, I wondered whether we could do it as he said, which caused me much stress and pain.

On the day of the event, unexpectedly, Prof. Ishikawa served as coordinator, moderator and speaker actively and dynamically for a little over four hours and wrapped up the SteCom with closing remarks, saying “Let’s aim as much as possible for a speedy TQC that makes everyone happy.” It was hard to believe that he had come to the venue straight from the hospital.

As I expected, he excused from the gathering. So, I took him to his car to see him off back to the hospital. I can’t forget the conversation during this time.

He suddenly stopped in the front lobby and handed me 1000 yen, saying, “Could you?”

In some perplexity, I asked, “Sir?” Then, I saw him pointing the cigarette vending machine, and I immediately knew what he wanted me to do.

“But, sir, you are under doctor’s orders, aren’t you?”

Prof. Ishikawa with a harsh and bitter stare said, “Well, no, it’s OK. Just hurry up!”

I mumbled, “I shouldn’t be doing this,” but made the excuse to myself, “He was smoking during the meeting, and a box of cigarettes will not do much harm...” I picked up the box dispensed by the vending machine making the “plop” sound and held it out to him along with the change, but he only accepted the box.

“No, use it up. Get as many as you can. Make it quick!”

The image of graceful Mrs. Ishikawa knitting her eyebrows came to my mind for a moment and I said,

“Your wife will get mad at you.”

“Um, well, never mind. Just get them quick!”

He looked like a spoiled child getting up to mischief behind the back of *Nio* or *Kongorikishi* (muscular guardians of the Buddha).

Plop, plop, plop.

“Yes, thank you,” he said and chuckled.

His “chuckles” on this time was, as it were, “nothing that contains everything,” or, if put differently, his face looked just like the face of the boy in *Muga* (literally, selflessness), the greatest masterpiece of *Yokoyama Taikan* (famous Japanese painter).

Oddly enough, exactly one year after, on April 16, Prof. Ishikawa passed away.

(Director, Training Department, Toden Gakuen,  
Tokyo Electric Power Company)

## **Get me Cigarettes, Please**

Ms. Noriko Kusaba

“What is that?”

Dr. Ishikawa asked me about the brooch shaped as a squirrel that was pinned to my wrap skirt instead of a safety pin. It was a warm day in autumn shortly after I had just begun working.

“Take this home and enjoy with your mother”

“This is a new product, there’s one for your mother and one for you. Try it, and tell me how it was”

My father, who was working for Nippon Koukan Corp., had suddenly passed away when I was in high school.

Ding Dong! The bell at the front door rang, and when I went to the door as fast as I could with my leg feeling heavy in a cast, I saw a stout figure through the frosted glass.

“I’m on my way to Taiwan now, and dropped in on you to see how your leg is healing.”

I had torn my Achilles tendon and was recuperating at home, and Dr. Ishikawa came to see me twice despite his busy schedule. “Stay at home until you heal,” he said, and asked a driver to deliver a typewriter at my house so that I could work at home.

He had been very kind to others but was tough on himself. Immediately after he had a surgery to remove a colon polyp, the entrance examination for the university was held, and as was decided before the surgery, Dr. Ishikawa came to work directly from the hospital.

“Get me cigarettes, please.” It is a little memo written in red ink.

Dr. Ishikawa loved to smoke, so he would place this memo on my desk when cigarettes ran out. It’s no longer necessary, but I somehow cannot throw it away, and have kept it with me.

(Former Secretary for Master, Musashi Institute of Technology)

## 5.4 Heavy Bag

### **Prof. Ishikawa's Bag**

Takeo Yamaoka

We started to receive the counseling of Prof. Ishikawa since our company had introduced quality control in 1976. Our company was founded in Chofu, Tokyo in 1938, and Prof. Ishikawa's residence was also located in Chofu. With such close proximity, my father, who was the three generations former president of our company, was personally acquainted with Mr. Ichiro Ishikawa, the father of Prof. Ishikawa before World War II. Years later, we received the counseling of quality control from Prof. Ishikawa, our two generations had a great deal of support from them.

The counseling of quality control given warmly and strongly by Prof. Ishikawa brought success to our company. The customers from all around the world selected our products and made our business grow.

Whenever I took the counseling from the professor, I always had a strange feeling which I cannot explain even to myself. I had tension because the professor was a world-famous leading figure of quality control and held him in awe. On the other hand, I felt close to the professor when he said like, "ladies' cosmetics are basically hard push strategy products. They hire beauty advisors in a department store and catch prey when a lady passes by, telling her how beautiful she looks!"

I am always keeping his words in mind as one of the industrialists engaging in manufacturing: "If a new product can be developed within the scheduled period, preparation of the start-up promotion also goes well and reaches 95% of the go-through rate, and it sells very well after the release with nearly no complaints, then your quality control has matured."

I think that Japanese-style quality control looks like [Yangmingism \(Neo-Confucianism\)](#), that is, a practical science of knowledge as action. Many people may feel something like love of humanity from Prof. Ishikawa of his own style, who counseled the theory of quality control with easy words and deployed it to extended activities such as QC Circle.

Even now, I cannot help but feel that Prof. Ishikawa comes by briskly walking, hunching his back a little and holding that heavy black leather bag like a medical doctor's bag.

(President and CEO of JUKI CORPORATION)

## **Another Work While Chairing a Meeting**

Yoji Akao

When I close my eyes I picture Professor Ishikawa's figure walking with his heavy bag. I was very curious to find out what was in his bag. When I got drunk, I asked him this question.

Of course Professor Ishikawa showed me what was inside because he was also drunk. Many documents and letters yet to be dealt with, paraphernalia such as the seven tools of scissors and glue, his indispensable medicine, newspapers, and magazines: were there. I was astonished that it had almost everything he needed. This disclosed his secret of how he made the time to work night and day, and to have the communication drinking. This disclosed his secret of how he could work a lot, never-ending work and drink-communications ("*nomunication*").

The Professor was doing another work while being a chairperson at a meeting. He was writing letters and articles. I think he was able to achieve such superhuman work, whenever and wherever, with tools in his bag. I once tried the same, but I could hardly follow him and I ended up in vain just having exhaustion. I copied his bag and contents, so I had taken his bag home by mistake when I got drunk. Although the Professor also did take my bag, I was in a cold sweat. I think nobody made the same mistake just like me.

The Professor used to read newspapers in train without any exception. He always used to say, "Read newspapers in every nook and corner without fail". I think this was why I think he had strong general knowledge and knew all matters in depth. In his collection of sayings, there are "Qualifications for QC Engineers," are 1) to have a common sense, 2) to handle superiors, and 3) to be able to drink. I was not confident in 1) and 2), so I tried hard concentrating only on 3). Although I got a duodenal ulcer, luckily enough I recovered within a few years. I received his guidance from all aspects through "*nomunication*."

My debut paper was successful, thanks to Professor Ishikawa and together with Professor Moriguti, helped my research bring out at the third month of the 7 BC (7th Quality Control Basic Course by JUSE). My doctoral dissertation on "Compressed Limit in Control Chart" was also initially inspired by him. I was happy to cooperate with Mr. Yoshikawa of the 7 BC classmate graduate for completing *The Control Chart Method*, which was one of the subject that Professor Ishikawa gave a high priority. I remember myself checking his work meticulously after we were ordered, "Both of you, check all the calculations in this book." The Professor used to write memos vigorously

onto his notebook at the QC counseling sessions. These were memos, however, of what he thought at that time instead of what other people mentioned. *The Control Chart Method* was formulated from these. This is the reason why some words and sentences appear unrelated to each other in his written contents. This makes it his own and unique logic to others.

The Professor made proposals or took the lead on many QC activities, which are currently being performed through the Editors' Committee of *Hinshitsu Kanri* (Statistical Quality Control) and Quality Month Committee. Needless to say that he is a real father of QC Circle.

Two years ago at the International QC Conference in Brazil, I heard the voice of the Professor after his death. I approached the crowded spot and found a video lecture by the Professor. I was moved by the fact that the Professor's teachings have been spread among 50 countries in the world.

Moreover, I realize that it is our mission to make efforts to inherit and extend the Japanese-style TQC without damaging the great footmarks the Professor left.

(Professor of Tamagawa University, Faculty of Engineering,  
Department of Management Science)

## 5.5 Hobbies

A book has been written about Professor Ishikawa's interests, as he had various hobbies apart from golf. In Section 3.2, Professor Ishikawa's interest in pachinko (pinball game) has been written by Prof. Tetsuichi Asaka. In Section 6.1, his interest in photography has been written by Mr. Rokuro Ishikawa. In Section 6.3, his interest in driving has been written by Ms. Yoko Kurokawa. Also, Mr. Tadashi Asao (Section 4.3), Ms. Yuko Kurokawa (Section 6.3) and Mr. Yutoku Ishii (Section 13.2) describe his interest in mahjong. A flower photo works, which the Professor had taken from his home garden, were exhibited at the remembrance of the first anniversary of his death, and all attendees were moved by his far from amateurish photo outputs. We inserted two such works at the end of Section 6.3.