Profiles in Quality: Learning from the Masters
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Homer Sarasohn

Homer Sarasohn's story begins in 1945 with a telegram on his desk at the Massachusetts Institute of Technology's (MIT) Radiation Laboratory, where the young product development engineer had a reputation for quickly converting preliminary product designs to manufacturable prototypes. The telegram, from a colonel in the U.S. Ware Department, said:

> General MacArthur's Headquarters has requested your services earliest possible date. Upon receipt reply your availability. Instructions for processing will follow.[1]

MIT's engineering crew was full of practical jokers, and Sarasohn assumed they were at it again. "Two weeks later, I got a call from this very irate colonel in Washington, upset that I hadn't even had the decency to respond to his message," he recalled later.[2]

Sarasohn went to Washington to hear more about the request and agreed to a nine-month assignment in Japan. He went that fall, joined the Civil Communications Sections (CCS) of MacArthur's headquarters, and stayed five years.

His task was to figure out how to supply the Japanese populace with radios to receive communications from Occupation Headquarters so that it could nip in the bud insurgent hostility from doubts, rumors, and speculation. The problem was the Japan had been essentially destroyed as a function nation and a functioning economy. (This was 1945, and the men we acclaim as gurus in the worldwide quality movement had not yet arrived to impart their knowledge and advice to a resurgent Japanese industrial sector.)

Sarasohn recounted the situation he found on arrival: "The nation and its economy was at that time at a standstill. It was virtually impossible to do any manufacturing of any kind. For all practical purposes, factories, production equipment, tools, supplies, raw materials — none of it existed. The shops that were still standing had very little to sell and the people had very little to make any purchases with. Such personal items as they had been able to save or salvage were used as currency to buy whatever they could."[3]

It was a climate ripe for guerrilla warfare. According to U.S. Army intelligence, approximately three million Japanese soldiers had been held in reserve to defend the home islands against an invasion; civilians had reportedly been given wooden clubs and spears with which to make a last stand against the enemy on the beaches. Arriving Americans were concerned, typically going armed among a people many Americans had come to see a barbarous through the long, bitter years of war. In the first months and the years to come, however, not one incident of public disorder occurred.

According to Sarasohn, there was more at work in the prevailing calm than a benevolent occupation force imposing its will. The people of Japan, he reasons, were compliant and obeyed

the occupation directives because their own authorities, who they had been taught to believe were infallible, had been discredited. Victory was not inevitable; it was not to be. The home islands were not impregnable; the Americans were everywhere. The Japanese were a people conditioned following their leaders. Now, history had brought them a vacuum in leadership. If the American occupation could provide direction and begin to nurture new leaders, as much as possible without reparations or recriminations, the wounds of war might be allowed to heal in peace rather than become the festering sores that so often lead to still more hostilities.

To the Civil Communications Section of the occupation force fell the important task of involving the Japanese in the reconstruction of their nation and convincing a vanquished but still proud people that the United States did not intend to humiliate or terrorize them. Three initial objectives were set for Sarasohn to accomplish:

- Meet the occupation forces' own requirements for domestic radio and telephone services, but do so through Japanese sources.
- Supply the Japanese populace with radio receivers so they could receive broadcasts from the Civil Information and Education Section, Supreme Command Allied Powers (SCAP) bureau charged with communicating messages and directives of the occupation forces to the people. Although U.S. Army transmitters could be used to broadcast, the Japanese lacked receivers.
- In the process of accomplishing the first two objectives, build a progressive communications industry that would contribute to the revival of Japan's economy.

Sarasohn took the second task as his starting point because he knew that the ripple effects from that would work to accomplish the first and third. Getting reliable radio receivers into the hands of the Japanese people was a challenge of major proportions. As he recalled: "We had no production facilities to start with. We had very little material resources. The machinery that might have been available either had been destroyed or damaged by the bombing, or had been deployed by the Japanese into the countryside to escape the bombing. These machines or parts had to be located, returned, refurbished, and installed. We had to locate people to be brought in as workers. We had to start getting factories built. We had to start, literally, from the ground up to produce vacuum tubes, resistors, transformers, chassis — and all this had to be done from resources within Japan. We had no possibility of getting supplies from anywhere else."[4] In fact, the occupation policy did not permit, except for extreme circumstances, the importation of materials from the United States.

Ironically, in the light of global business in the 50 years since, one of the most troublesome issues to resolve, beyond the pressing plant and material concerns, was the lack of management expertise. Japan's prewar and wartime leaders in government, industry, and the military had been removed from their positions of influence when the occupation began. They were barred from any positions of authority. The situation was similar to dismissing every senior and upper level executive at AT&T, destroying its production and distribution facilities, and then trying to reconstitute telecommunications services in the U.S. Just as new factories were needed, new leaders also had to be identified, trained, and thrust into positions of management responsibility. The need for Japanese managers was recognized as critical by the small staff that made up Sarasohn's section — just seven, including interpreters. The Americans there couldn't possibly do the job that had to be done just by themselves.

Some of the individuals picked for managerial positions were chosen almost at random. Until that time, they had been intermediaries in their organizations, passively passing instructions from superiors to subordinates. They had not been involved in business planning, strategy formulation, personnel and resources management or quality control. Suddenly, they had to be. Not only were they inexperienced, nothing in their past manufacturing traditions had prepared them for anything resembling what is known as quality today. "The Japanese style of management, which today is so highly regarded, at that time was a prime example of confusion and inefficiency,"[5] Sarasohn said. "There was no real understanding at the top level of either government or industry of the methodologies of mass production and its specific requirements for organization, for supervision and for measurement. It was absolutely impossible, based on their manufacturing methods, to get consistent production and reliable products."[6]

Industry in prewar Japan had hardly been a quality-driven enterprise. The problems, as Sarasohn encountered them, were fundamental and systemic. For starters, though Japan had prepared for and carried on a major war, it was far from a fully industrialized nation. What machinery it had was antiquated. Many prewar manufacturing operations were prone to adapt universal-type machines to the production of single-purpose products, a costly practice because it was inefficient and all but impossible to maintain quality tolerances. In the prewar era and after, "Made in Japan" often meant junk.

Yet, out of the post-war reconstruction would come a pantheon of new names that would set worldwide standards for quality: Sony, Matsushita, Sharp, Fujitsu, Toshiba, and NEC. These businesses cut their eye-teeth on the making of radios and other communications products and the rebuilding of their nation's infrastructure. In the process, they would learn important lessons about management's role in a quality-driven enterprise.

The conditions in which people had to work when the post-war reconstruction period began were daunting. Factories were hot and humid in the summer, cold and damp in the winter. Many were little more than sheds where equipment could be sheltered from the elements; construction materials for new buildings, like every other vital commodity, were all but impossible to come by. Inside, work surfaces were thick with dirt and dusty, frequently contaminating products. Vacuum tubes were manufactured in buildings with dirt floors. Waste was high, and output by any measure of productivity was low.

Amid such defeating conditions, the newly minted production managers had little reason to expect high yields or high quality, and they acted accordingly. Although Sarasohn found line workers trying their hardest to improve their own lives and help reestablish Japan, managers trained for passivity had not yet accepted the challenge of their own new positions.

In late 1946, Sarasohn brought the situation to a head by calling the Japanese plant managers to his office at the Civil Communications Section headquarters. He listed the poor results being accomplished to date and asked them for their ideas on how to improve. For beginners, he wondered, what did they think was the major obstacle to getting better product yield?

Never having been asked previously for their opinions on anything, the managers got up, moved down to the end of the table and started talking among themselves.

"I asked the interpreter what they were talking about," Sarasohn recalled. "He said they were talking among themselves about w hat answer they could come up with that would be most pleasant for me to hear."[7]

For Sarasohn, the moment was a personal turning point, bringing him to two contrasting conclusions. First, it illustrated how much he needed to learn about the Japanese character and culture and how critical the language barrier was. He resolved to cross it by learning Japanese to remove the dependence on interpreters. It was of major importance to be able to communicate with the managers both in their own language and in their own cultural frame of reference.

At the same time, he decided this was the time for direct and forceful action. Secure because of General MacArthur's authority, he acted with American brashness to do what need to be done — no more standing on ceremony, no more tolerance for circumlocution. To get the on-site managers to face up to the need for such basics as workplace cleanliness and scheduled machine maintenance, he defined quotas and insisted that they be met. When it became obvious that meeting those quotas would involve t he generation of new standards and measurements, Sarasohn and his Civil Communications Section colleagues picked managers at each site to take on the standard-setting task. Their demands were simple: quality or else.

To enforce the demands, Sarasohn created an outside agency, the National Electrical Testing Laboratory in Tokyo, to assure that standards would indeed be met and not simply logged on a quality assurance sign-off. Every product by the new communications industry, from radios to telephones and components, was subject first to type approval and then subsequently to random testing, using products from a company's inventory or off the store shelf. Any product that failed was completely pulled from the marketplace until it passed.

From that firsts meeting and subsequent sessions on performance measurement came the broad outlines of participative management. Top managers received their raining in fundamental business concepts from Sarasohn, then were charged with going back to their businesses and teaching their subordinates how they could do what was supposed to be done. The subordinates, in turn, communicated the new standards and values to their workers on the shop floors, in the process setting the stage for the development of quality control circles to close the loop on the information flow.

To get everyone involved in the quest to improve productivity, Sarasohn believed three basic values had to come to the fore:

- Commitment. The spirit of the organization has to spring from a total commitment by everyone in the enterprise to defined performance goals.
- Ownership. For everyone to be motivated to contribute to the group's success, everyone has to have a sense of personal ownership of the work and the organization.
- Feedback. Communications, up, down, and across the lines of the organization is the lifeblood that carries the information needed to do the job right the first time and places each individual's contribution in the broader context of the organization.

Information, Sarasohn reasoned, keeps the sense of commitment and ownership alive.

As the revived business began to function more productively, yields rose and quality problems dropped. However, there was still a noticeable shortfall in the capabilities of the new managers. Responsible as they were willing to be, it was clear they had a lot to learn about modern methods of management. In 1948, Sarasohn proposed to teach them, in the process incurring the ire of many, including some from other sections of SCAO headquarters. These objectors were determined to keep Japan a weak and subjugated nation. He was told not to share knowledge with the enemy. Undaunted, he presented his case directly to General MacArthur, who listened to both sides and told Sarasohn to go ahead. The Civil Communication Section Seminar was born.

Working with Charles Protzman, a new Civil Communications Section arrival from Western Electric, Sarasohn holed up in an Osaka hotel where they spent a month building an eight-week curriculum and writing a textbook for the seminar. Protzman, a pragmatist, took on manufacturing, finance, accounting, and distribution. Sarasohn, an idealist, handled quality control, management organization, research and development, and product innovation.

The seminar that resulted was anything but a course in the American style of management. Drawing on their own experiences, whatever books they had brought to Japan or could requisition through General MacArthur's headquarters, British sources on industrialization, and a sense of what should be rather than what usual is, Sarasohn and Protzman cobbled together a mini masters of business administration program, which they dubbed "The Fundamentals of Industrial Management." Then they hand picked groups of 30 to 50 senior managers from the best of their fledgling businesses and select ministries of the government to attend. No refusals, substitutions, and absences were allowed.

Initially, Sarasohn was adamant that no one from the outside would be allowed to stump for their own peculiar ideas: "I wanted to keep the carpetbaggers out. I had that very much in mind. When we talked about raw materials, or production processes, or factory organization concepts, I did not want to import a rigid philosophy…to say, 'I'm an American, this is what we do in America, you do what we say.' My approach in our lectures was to take a very fundamentalist point of view: how you go about process innovation, how you go about design, how you go about manufacturing, and winding up with the ultimate measure of your success — customer satisfaction."[8]

Nothing made a more immediate or profound impression than the idea of statistical quality control (SQC), introduced by Walter Shewhart in the U.S. in 1924. Officials of the Union of Japanese Scientists and Engineers decided that that was why America won the war. They termed it the "secret weapon" the United States used to gear up its industries for the war effort. Their infatuation with the concept worried him at first; he feared they would see SQC as merely a mathematical tool for use in manufacturing, as a magic wand, rather than a multifaceted management approach to continuous improvement and quality control. Despite repeated requests, he refused to bring in the author of the concept, Walter Shewhart, until it was time to build a second level of the Civil Communications Section seminar, this one targeted directly to plant managers.

By then it was 1950, and events were rapidly changing the face of the U.S. occupation effort. Japanese companies were back on their feet and the communications industry as well as others were now self-sustaining, relieving many of the earlier needs to rebuild and nurture. The onset of

hostilities in Korea changed the operating priorities in General MacArthur's headquarters. Originally contracted to spend just nine months surveying the post-war situation, Sarasohn was by then a five-year veteran of Japan's revival. He was ready to return to the U.S. It was time to hand off parts of the management training program he had so carefully created.

Due to ill health, Shewhart was unable to make the trip to Japan. Sarasohn and the Japanese turned to W. Edwards Deming, then a professor at Columbia University who had been a protégé of Shewhart and had earlier visited Japan to help with the census. Deming arrived in the summer of 19950 to teach SQC; Sarasohn returned to the United States in the fall of that year. He spent the next seven years with Booz Allen & Hamilton, a management consulting firm, then 20 years with IBM before retiring to become a private consultant and lecturer.

Ironically, on returning to the U.S. in 1950, Sarasohn would find himself unable to duplicate the Japanese results with the American businesses he work for as a consultant. In Japan, he would later recall, workers on the shop floor, their line-level managers, administrators and executives throughout the organization, understood firsthand the need for harmony and cooperation toward a common goal. The war and its aftermath demonstrated that they were all in a small boat and if it sank, all would drown together, regardless of title or position in the pecking order.

American businesses seemed beset on one hand with arrogant, unimaginative, and outright greedy management more interested in making as much money as possible as quickly as possible and, on the other hand, workers, especially unionized workers, accustomed to playing an adversarial role in search of their own piece of the pie. Nowhere did he find the sense of community interest and willingness to work for a common goal that made it possible to do so much so well and so quickly in the devastated conditions of postwar Japan.

Although the history of quality does not record Homer Sarasohn's name in the bright lights reserved for Deming, Juran, Crosby, and others, his contributions are noteworthy:

- He helped fast track the revival and growth of the postwar Japanese electronics industry.
- He sowed the seeds of participative management through his insistence on extensive top-down communications from the new generation of Japanese business managers to their subordinates and line-level workers.
- He helped prepare the Japanese for learning statistical quality control and the many other lessons that Deming would later teach them.

Although he was not a quality theorist, Homer Sarasohn was a right man in the right place. He was a tough—minded facilitator w ho helped engineer many of the basic processes and nurture many of the new breed of Japanese business leaders that together would set the pace of a worldwide quality movement.

Notes:

1. Sarasohn's personal files.
2. From an interview with the author.
3. From a presentation given to the Minnesota ASQC, 1992.
4. Minnesota ASQC, 1992.
5. From an interview with the author.
6. Interview with the author.
7. From an interview with Myron Tribus.
8. From an interview with the author.