It seems to me that most of the things published so far about quality control (QC) in Japan have dealt with methodologies or experiences of the people who were mostly responsible for its diffusion (people connected with the Japanese Union of Scientists and Engineers (JUSE) or other groups, or key figures in enterprise). The work under review examines the process of the introduction of quality control into Japan and typical examples in the different industries from an objective viewpoint that distances itself from the people personally involved, and it attempts to consider the overall significance of what is found from the aspect of Japanese business management history. Thus it is, I believe, the first book of business historical research.

The main task of the authors is set out in the introductory chapter. This is described as explaining when, and how, the change took place in the ideas about control that support the Japanese-style production system, and to do this by examining, in representative enterprises and places of business that received a Deming Application Prize or a Deming Division Prize: (1) the time of the introduction of statistical quality control (SQC), the methods used, and the intentions of its main backers; (2) the time of and background to the switch to total quality control (TQC) and its spread to the shop floors, and the intentions and methods behind them; (3) the time, background, intentions, methods, etc. involved in the introduction of quality control circles and their firm entrenchment. How much the authors have succeeded in the task they have set themselves will be the main
In the next few pages I shall introduce the contents of the chapters in their order of occurrence, adding comments as I go along, and then finally I shall make an assessment of the book as a whole.

The first chapter paints the overall picture of the evolution of quality control in postwar Japan by tracing the activities of guides such as W. E. Deming and J. M. Juran and of JUSE and other bodies that undertook the role of enlightened diffusion of the ideas. I found this a good introduction that presents the basic information that helps the understanding of the case studies that are to follow after. The only thing I thought was regrettable in this first chapter was where, in speaking of the Deming Prize, which originally was given to individuals, the statement is made that "it is not clear who, and for what purposes, made the decision to grant a prize to enterprises, too" (p. 10). This left me with the clear impression that there were time limitations to the production of this book and that personal interviews with relevant people were not made. Yet if the authors had been able to make this point clear, we would be able to know whether the guides promoting enlightened diffusion right from the start aimed at whole-factory campaigns, or thought of them as measures to further encourage moves that were already evolving within the enterprises. In other words, it would become easier to determine whether the whole-factory campaigns were of an autonomous or heteronomous nature for the enterprises concerned.

Chapter 2 profiles the Kawasaki Works of Nippon Steel Pipe (Nippon Kōkan), recipient of the Deming Application Prize in 1958, showing how a visit to the company by Juran (how this was arranged is not clear) and M. E. Mandle's diagnosis of the factory led to the introduction of QC and industrial engineering techniques in the 1950s, how QC circles formed at the invitation of management in the early 1960s would, despite a period of temporary stagnation, become firmly entrenched when the self-inspection system was firmly established. It does this by extensive and judicious use of internal documents. What is especially impressive about the description in this chapter is the way it clearly situates the intentions, perceptions, and overall divisions of roles of people of different positions involved in
the processes, by thoughtful interpretation of the written materials and personal interviews with those people. It would have been even more convincing if (and I suppose this would go beyond the intentions of the authors and the scope of the description) we could be shown how the industrial engineering techniques and QC techniques themselves contributed, and what the reactions of the various people in charge were, at the different epoch-making times of large technological innovation (for instance, the introduction of the continuous casting method) within the course taken by the production system as a whole.

In chapter 3 the author examines in a comparative history approach the evolution of QC at Nissan (recipient of the Deming Application Prize in 1960) and Toyota (recipient of the Deming Application Prize in 1965 and the First Japan Quality Control Medal in 1970) from the end of the 1940s to the end of the 1960s (particularly the latter period), and it shows the difference between the way Nissan, the first company in the automobile industry to receive the Deming Prize, let its activities stagnate after it received the prize, and the way Toyota, playing catch-up, pushed ahead with even more energetic campaigns after it received the Deming Prize. Similarly, as regards the control of orders from suppliers as an extension of QC activities, the authors hold that, whereas Toyota moved toward a tiered specialization system when the mass production system was firmly established in the 1960s, Nissan aimed at "synchronization of management," and the authors also touch upon the backgrounds to these moves. Since the authors dynamically place the tasks faced by the automobile industry and the measures adopted to cope with those tasks from a business management standpoint (with QC activities a part of these measures), within the framework of the development of the Japanese economy as a whole, the reader finds it comparatively easy to grasp the overall picture.

On the other hand, however, the author does not seem to have had a chance to conduct any personal interviews, and they mainly go along with the publicly expressed views of proponents of QC measures, so that the views of opponents and the issues at the time are not clear. Also, and possibly this stems from the same cause, probing analyses of the way QC activities were carried out are sadly lacking. As a result, doubts remain about such things as the connection between Nissan's
industrial engineering and its QC, the connection between Nissan's automation and computerization of production equipment and its TQC activities, the yardstick for classifying the progress stages of Toyota's TQC activities, and the author's final ambiguous assessment of Toyota's new tiered method of controlling supplier orders—should it be seen as "coercion" my means of the first-ranking parts makers, or should it be assessed as "self-enlightenment" on the part of all the parts makers?

Chapter 4 is an examination of the motives for introducing TQC at Komatsu Ltd. (recipient of a Deming Application Prize in 1964) in the first half of the 1960s; the concrete connection between liberalization measures and the promotion of TQC; the QC activities at the Awazu Plant of Komatsu Ltd., where manufacture of a new test model and a mass-production vehicle was attempted; and other topics. As a result, we learn that the introduction of TQC was first of all carried out "top-down," as a countermeasure to the liberalization of trade and capital—in the concrete, to the establishment of Caterpillar-Mitsubishi—and then gradually a flow-back system was formed that incorporated "bottom-up" elements; that there was a division of labor between the outward-directed role of the president, Ryōsei Kawai, and his lobbying of MITI, and the inward-directed role of Ryōichi Kawai, who bore the burden of TQC promotion in concert with Kaoru Ishikawa, an outside specialist consultant; that the plant's QC activities began in the process of changes made to the production system by the introduction of the Takt system, and they were invigorated by the QC circles derived from "workplace study groups."

Still, I cannot help thinking of a few questions. For example, I wonder about the measure used for dividing the infiltration of quality control into Komatsu Ltd. into three stages, and its generality; about the criteria used for classifying the character of QC circles into the self-enlightenment/mutual enlightenment type and the problem-solving type; about whether it is possible to conclude that a flow-back channel from "top-down" to "bottom-up" formed, just from telling us about a method called "the banner method" without any analysis of how it worked.

In chapter 5 we get to see how, from the second half of the 1940s (immediately after the war) up to and including the 1960s, the headquarters of the parts division of Matsushita Electric (recipient of the
First Deming Application Prize for a Division in 1966) moved from the introduction of SQC to the implementation of QC. Here we learn, among other things, that SQC was introduced as a result of the Civil Communications Section Management Seminar sponsored by SCAP’s GHQ, and its activities were limited to testing and technical staff; that internal standardization and a system of quality guarantees were instituted when the company was to be accredited by Japan Industrial Standard.

Among the things that are explained in regard to the process of infiltration of QC activities include the fact that the lessons learned by the company when it was unable to have sufficient supplies on hand to meet the increase in a demand for parts after increased sales of household electric appliances in the second half of the 1950s led to a strong realization in the early 1960s of the need for providing for such exigencies; that from 1961 the education of shop floor inspectors began with classes on QC for foremen (shokuchō) and group leaders (hancho), and that from among the latter group were to arise the mainstays of the quality-control circle movement for improvements on the shop floor; and that policies of organizational promotion were hammered out to overcome the limitations of this early movement, and these led to the expansion of the movement.

The only thing I would like to ask about here is, why is it that the education of one segment of the shop floor inspectors—the QC education of foremen—was not able to become part of the origins of the QC circles movement? I was rather disappointed that there was not explanation of this point.

Chapter 6 neatly ties together all the responses to the tasks mentioned in the introductory chapter. Regarding the first, the introduction of SQC, it was promoted in the second half of the 1940s with the backing of various domestic groups and the Occupation Forces and for their purpose, which was to overcome Japanese industry’s comparative disadvantage in quality and productivity. At that time the lectures of Deming and Juran and things like the Industrial Standardization Law fulfilled the function of promoting the introduction of SQC. The introduction of SQC also contributed to encouraging the setting up of internal standards and criteria. The principal mainstays of SQC at
this time were members of staff involved in quality control and production technology, and SQC did not extend to companies as a whole.

It summarizes the second task—the time and reasons (intentions), and the methods of the switch from SQC to TQC and its infiltration down to the shop floor—and the third task—the time and reasons (intentions), and the methods involved in the introduction of quality control circles and their firm entrenchment—thus: on the basis first of all of a system of QC education of shop floor inspectors and enhancement of the capacity for improvement, smooth communication and cooperative relations between technical staff and the shop floor, and an accumulation of problems requiring improvement—on the basis of all these conditions, in the first half of the 1960s there were formed on the shop floors independent groups striving for improvement. From the mid-1960s companies attempted to promote the activities of organized QC circles, in such a way that they would eventually absorb these independent groups. When the QC circles were first introduced, shop floor inspectors were the leading figures, but later, the team leaders that started out ranking below the shop floor inspectors gradually tended to become the leaders. The chapter also points out the important role in expanding and diffusing the activities of QC circles that the JUSE and other external bodies played.

In the course of the chapter the remark is made that, "as an environmental condition that made possible the smooth communication" between technical staff and the shop floor, "mention can be made of the fruits of the battle waged by the postwar labor unions to abolish the differences in social status between the office workers and factory hands" (p. 210). Certainly this would be an "institutional" aspect that is too important to be overlooked. But is it not possible to consider the postwar QC circle movement, itself, a factor that encouraged the abolishment, in substance, of the factory worker–office worker difference? Nowhere in the book, as far as I could recall, was there any extended discussion of the ripple effect of QC activities. It seems to me, though, that if an examination of precisely this aspect had been given priority, then wouldn't the question about the change that took place in the ideas about quality control that forms the principal topic of this book have been answered?
In regard to this change in ideas about control that is the central topic of this book, the authors maintain that it was Japanese enterprise of the 1960s that brought about the switch from the SQC introduced from the United States (based on the idea of a separation between planning and execution) to “build in by the process” activities in which shop floor inspectors and general workers work as one (the idea of separation of planning and execution is abandoned). In addition, they say that “the thing to be noted is that the change in ideas of control did not come first and then the Japanese-model production system was formed, but historically it was just the opposite”—that is, they conclude that the formation of the Japanese-model production system brought about the change in ideas of control.

In regard to the conclusion part of the book I would like to raise two problems. The first one is, because the definition of the concepts of production system and Japanese-model production system are not clear, the meaning of the concluding portion is also unclear. The second one is, if one were to extend the topic of the book so as to cover the prewar period as well and could discover there what might be called a “Japanese-model Taylorism” that discarded the idea of the separation of planning of execution and so was very different from the idea of control and basic principles of American Taylorism, the central task that this book set for itself would lose its very meaning.

Despite all the doubts that remain after reading this book, on the whole it adopts a consistently empirical approach based on the careful unearthing of written sources and on personal interviews, and difficult-to-obtain data is put together in a comprehensive and systematic fashion. It can be counted among the few pioneering research works to paint a complete picture of the history of postwar Japanese quality control.

I conclude my poor attempt at a review with a word of gratitude to the authors for enabling me to learn so much by means of their book.