SPECIAL REPORT

The Secret of Japanese Management Resulting in High Productivity Part II

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The Japanese Corporate Structure and Productivity

The Japanese corporation is made up of a cohesive group of employees personally and subjectively interested in the corporation's development. Furthermore, employee participation at many different levels of management decision-making is encouraged, while intervention by the investor, whose interests do not coincide with those of corporation management, is effectively prevented. Although perhaps an oversimplification, the Japanese corporation may be concisely described as an organization "of the employees, by the employees, and for the employees." What effect does this corporate structure have upon productivity?

First of all, Japanese corporate management is free to single-mindedly pursue the corporation's development. There are few similar situations to be found elsewhere in the world.

In a socialist structure, corporations are under complete control of the state, have very little independence, and are easily subject to political intervention. But even in a capitalist nation, a corporation whose capital and management are not clearly differentiated is subject to interference from its shareholders. When there is the fear that a company may outgrow its principal shareholder, it is not uncommon for such a company to forfeit growth and instead adopt a management policy that freezes the corporation in its current state. It also happens that a corporation may be sacrificed and its capital invested in a completely different enterprise if there is not enough profit.

In a country such as the United States, where there is considerable shareholder pressure on management, financial considerations are placed first. As a result of the expectation of high dividend returns within a short period of time, it is difficult for the manager to make drastic investments in equipment or major innovations that will only bear fruit over the long term. The American manager, threatened with possible dismissal within a relatively short period of time if his performance proves unsatisfactory to the shareholders —a possibility he has to face on a quarterly basis—does not have the leisure to concern himself with preparations for future generations.

A Japanese bank may step forward if a corporation's management is confronted with a crisis, but under normal conditions

the Japanese corporation's management is generally free from outside forces whose interests may not always coincide with those of the corporation. The Japanese corporation's leadership, headed by the corporation president, is constantly renewed under the seniority system. Because of this, the Japanese corporation is able to maintain its stability and continuity, and it is able to instigate measures that are constructive from a long-term point of view.

On the labor side, the lifelong employment system ensures that the fruits of human investment, in the form of accumulated skills, will nearly all be reaped eventually. This is an incentive for management to actively encourage employee development. A laborer's skills are his personal assets. But in the Japanese system, where the corporation and the employee are tied together permanently, the laborer's skills are an important corporate resource as well. As a result, nearly all employee training in Japan is conducted in-house. Even when the employee goes to a business school or some other outside institution, he goes not as an individual paying expenses out of his own pocket but usually at company expense as part of the personnel-education program.

Today, South Korea, Hong Kong, and Singapore appear to have the same social and cultural environment as Japan. These countries do not have lifelong employment. Therefore, "job hopping," in which an employee who acquires a high level of skill in one company moves to another company in search of better remuneration, is common in these countries. This deprives the corporation of the incentive to develop its employee's abilities.

In the Japanese corporate structure, it is possible to foster the development of highly skilled employees who are flexible enough to adapt to the changing nature of a potentially important job. This skilled adaptability means that Japan is likely to maintain its leading position as industrial technology becomes more sophisticated.

Characteristics of Factory Labor and Productivity

The major characteristic of the factory is the high degree of authority and freedom labor has within the workplace—a characteristic common to all Japanese corporations.

In Japan, it is the laborer himself who determines the standard of work, such as when a new part is to be manufactured within a machine factory. IE (industrial engineering) was once overseen by college-trained engineers, but in today's Japanese factory this responsibility is more and more being transferred to the laborers themselves. The engineer's function is increasingly being confined to research and development.

Japanese factories do have manuals with different job descriptions, but these manuals do not play a very important role in the systematic organization of labor.

In contrast, American and European laborers are closely supervised according to such manuals. The kinds of jobs required in a factory are considered and divided up into duties. These duties are then assigned to the laborers. The nature of a laborer's duties is strictly defined by the job manual, and the laborer is expected to faithfully follow the manual's guidelines. This is how labor is organized "by the book" in the West.

In Japan, the manual does not define the limits of a laborer's duties or how they should be carried out. Labor organization is entrusted to the laborers themselves. This is done by developing teamwork based on human relations. The result is a highly successful and flexible organization.

Work teams consist of seniors and juniors who teach and learn from each other and who are led by the factory foreman. In the West, the foreman represents the lowest level of management. He has his own, separate office within the factory, and his job is to convey the will of the corporation's management to the employees. The major role of the Japanese foreman, rather than to manage the workplace, is to function as a personal leader within the workplace, to guide the work teams, and to convey the feelings of the people in the factory to the management.

The work team, unlike a supervision system based on manuals, does not define the role of its members. Instead the members corporate to help and encourage each other.

There was a time in the past when Japan had the most gold medalists in the International Vocational Training Competition. Recently, there has been a rapid increase in the number of South Korean medalists. This does not necessarily translate into an overall rise in the standards of production management and product quality control in South Korean industry, however. This is because of the problem of "collective skill."

The highly skilled South Korean laborer regards his skill as his own personal asset, and he will not easily part with his knowledge to teach his co-workers. In Japan, superior technical ability is skillfully transmitted within the group to raise the level of the whole group. Even if one member of the team should have problems, he is aided by his teammates so that there is no deficiency of the team as a whole.

The collective skill of the team within the Japanese factory is the grassroots foundation of Japan's industrial technology.

The question then arises of why the laborer is allowed such a high degree of authority instead of being supervised from above with job manuals. The answer is simply because it is better for the corporation. It is better for the corporation because the Japanese laborer has a subjective interest in his work and voluntarily endeavors to improve his own productivity. If this kind of laborer is forced to adhere to regulations dictated by a manual in conformity with work standards determined from above, the result will be less flexibility, lower morale, and poorer efficiency. It is better and more natural for the corporation to rely upon the laborer's voluntary participation and to leave the responsibility for the factory to those who are most familiar with the workplace.

At one automobile manufacturer, every laborer on the assembly line has the authority to stop the line at any time. When production of a new model is begun, the assembly line moves at a very slow rate. As the workers become accustomed to assembling the new car, the line is gradually speeded up. The decision to speed up the assembly line is made by the laborers themselves. The speed of the assembly line, in other words, is a measure of the intensity of the work. Increasing the

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Table 1. Comparison of Suggestion Systems in Japan and U.S.

	United States	Japan
Rate of participation	14%	54.2%
Suggestions per person	0.15	4.73
Suggestion utility rate	24%	60.7%
Award per suggestion	¥30,530	¥852
Maximum per-suggestion award	¥17,250,000	¥300,000
Economic effect per suggestion	¥339,595	¥15,823

Table 2. Number of QC Circles Registered with the Union of Japanese Scientists and Engineers

	Number of QC circles	Number of QC circles members
As of end of 1965	4,930	70,920
As of end of 1970	33,499	388,543
As of end of 1973	57,599	600,300
As of end of 1976	78,395	774,012
As of end of 1979	103,644	977,474

Note: Amounts converted at the rate of $1 = ¥230.

Source: Compiled from FY 1978 Japan Suggestion Activities Association Survey and 1979 NASS statistics.

speed, therefore, places an increasing burden on the laborers.

The resistance of the laborers to increasing the speed of the assembly line in factories in Europe and the United States, and the efforts of corporation management to minutely define the duties of each worker in order to get the workers to agree to an assembly line speed-up, are to be expected. And yet in Japan it does not happen that way. The basic difference lies in whether the laborer voluntarily contributes to his own work and has a subjective interest in what he is doing.

The Japanese laborer actively promotes improvements in production systems through suggestions and QC (quality control) circles. For example, let us assume that an antomobile manufacturer has started production of a new model car. Within one to two months, there will be thousands of suggestions for reforms and improvements from the laborers in the factory. Of course, most of these suggestions will not be particularly useful, but there will be a few that are applicable. These few will be innovative ideas that the technicians working in the development labs would never have thought of. Born of the laborer's actual experience in the workplace, the innovative idea is tied in directly with improved productivity.

Most of Japan's major corporations have institutionalized some system of obtaining suggestions from laborers in the factories. So popular and fruitful have these proven that they now exist at 91.7% of all corporations listed on the First Sections of the Tokyo and Osaka Stock Exchanges.

With a suggestion system, the corporation management invites suggestions from the workers and provides certain rewards or prizes for particularly good ideas. After World War II, this system was widely adopted in Japan to encourage the voluntary participation of the workers in improving factory production processes. Especially after the oil crisis, there has been a geometrical increase in the number of suggestions. The number of suggestions made at the 453 corporations surveyed in 1980 was a fantastic 23.5 million. Overseas observers visiting Japanese factories find such a figure hard to believe.

Similar suggestion systems are also used in the United States. However, the custom is not so widespread, and the average number of suggestions made per person is only a small percentage of that for the Japanese worker. It is also often necessary in the United States to offer a strong economic incentives in the form of cash awards.

Another form of voluntary labor participation in product improvement is the QC circle. These are small groups of workers who discuss and exchange ideas on product quality improvement. The QC, a statistical control system adopted for product quality control, was first conceived of in the United States in the 1930s. Its form as a QC circle, however, in which all laborers work together in a volunteer group, was developed in Japan in the early 1960s. By 1979, there were more than 100,000 QC circles registered with the Union of Japanese Scientists and Engineers. The basic principle of these circles is quite simple and can be applied to many other fields besides product quality control. Today, it is widely used not only for product quality control but for many related fields, including office management.

These circles embody more than just a technique. They represent activity based upon the voluntary participation of workers in groups organized within the workplace. The result is a variety of improvements that could only have been suggested by laborers with a variety of duties.

For example, one of the strong points of the Japanese machine industry is the flexibility of its production system, which allows highly efficient mass production while at the same time allowing for a wide range of variations to suit the diversity of demand for specific products, functions, and qualities.

One factor making this possible is the "single step" system. In order to make different shapes on the same press, it is necessary to change the bite (the grinding

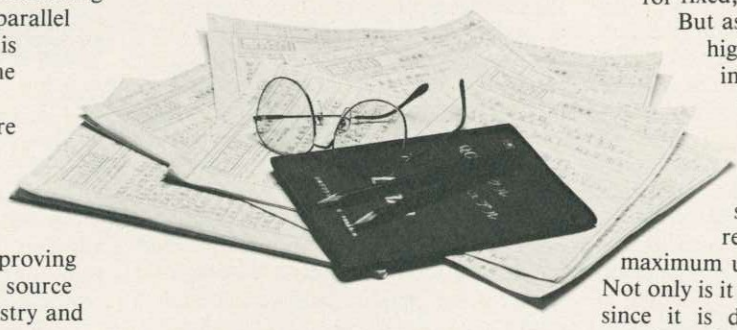
blade of the lathe) and other parts of the press, and to alter the assembly line arrangement. In the past this meant the press had to be stopped, and the changeover process usually took several hours. Today, it is possible to carry out the same procedure in only 10 to 20 minutes, a period of time referred to as "single time".

It is hardly necessary to point out the significance for efficient small-scale production of diverse products. And yet, there was no particular epoch-making technological innovation which made this possible. It is simply the result of the accumulation of innumerable small improvements made within the factory; improvements that would not have been thought of in the research laboratory.

The "one touch joint" system is another example. In this system, the connecting of hose sections, which used to be done one at a time, was reduced to a one-step system simply by bundling the hose pieces together in a plug shape and connecting them all at once. The new parallel changeover system in which it is possible to replace parts on one machine while others are still operating—a system much more efficient than stopping all the machines at once to change parts—is yet another example.

This kind of constant and voluntary participation in improving production management is one source of the vitality of Japanese industry and corporations.

The significance of this kind of factory structure for improved productivity is clear. There is, first of all, hardly any resistance from labor to large-scale investment in equipment involving new technology. A reorganization of labor, whether large or small, is required with any introduction of new technology. The worker's job may be altered to such an extent that his old skills are useless and he must make efforts to learn completely new skills. This is quite a strain on the laborer. In the United States and Europe, the problem is compounded by the fact that each individual laborer is closely tied to a certain set of duties. But in Japan, each worker has experienced many different kinds of jobs and has wholeheartedly endeavored to develop his own capabilities. And since he adapts, not as an individual but as part of a cohesive group, he is able to absorb the necessary changes with a relatively high degree of flexibility.



Kunihiko Ueda, 25, an assembly line and repair worker for Matsushita Electric Co., made a total of 6,919 new proposals and suggestions for the improvement of the product lines during 1980: an average 19 cases a day.

The Japanese laborer is more than just a producer—he is also a supervisor of production processes. As such, he maintains a subjective interest in improving production methods. Because of this it is possible to make maximum use of the worker's experiences and skills to improve production. As a laborer accumulates experience working with a certain machine, his productivity naturally increases. Under the Western system in which it is considered necessary to control the activities of the laborer, production systems are fixed at a very early stage according to a manual explaining work procedures. This tends to retard the educational process within the factory. Improvements in technology and equipment are constantly being made in the Japanese factory. In the United States and Europe, once a production system is decided upon and the necessary equipment installed, the tendency is for the same procedure to continue to be used to make the same product. Installation of new equipment in Japan is regarded as a starting point of an unending process of improvement and reform.

The question arises then whether the Western system of supervision according to a manual is suitable in an age in which industrial society is rapidly changing. Such a system does seem appropriate for fixed, simple, and repetitive work. But as the number of laborers with higher educational backgrounds increases—today, the majority of factory laborers are high school graduates—a system which forces a laborer into a simple work process designed for limited duties and responsibilities does not make maximum use of the worker's potential. Not only is it wasteful, it fosters bad morale, since it is difficult for the laborer to remain satisfied with such work.

Automation and the development of robot technology is gradually replacing people with machines to do simple repetitive work. The work still carried out by humans is therefore becoming increasingly complicated. The range of work a laborer can handle is also becoming broader. Given these trends, the Japanese system, in which the laborer has a wide range of duties, is aggressive in his work, and is highly flexible, is likely to become even stronger.

Problems of the Japanese Corporate Structure

It is apparent then, that the Japanese

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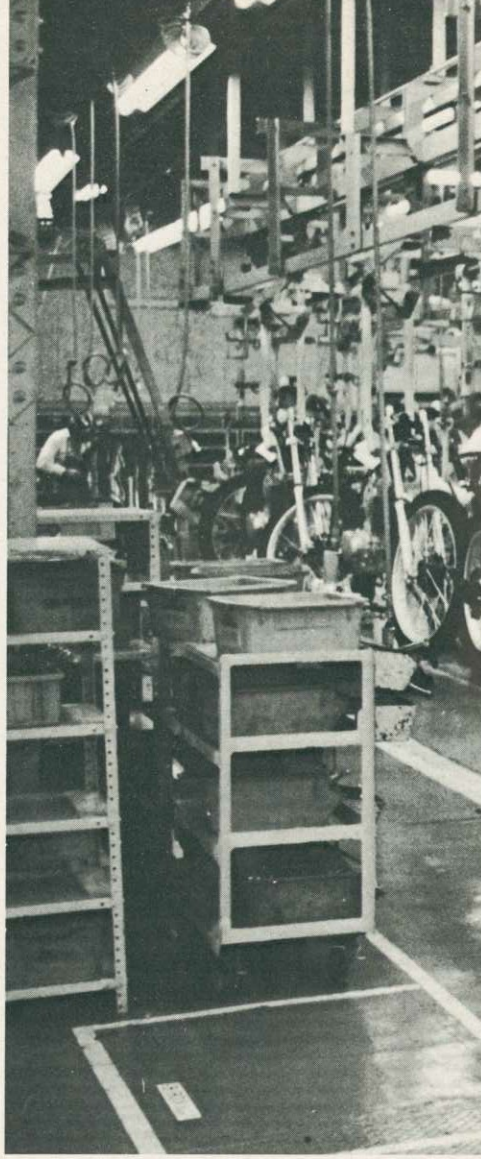


corporate structure is a plus factor in improving productivity. But it would be a mistake to place too much confidence in this factor, or to assume that it guarantees the superiority of the Japanese corporation. The incredible economic growth of over 10% per annum from 1966 to 1973 must be taken into consideration as well.

Improved productivity certainly had some effect upon Japan's economic development, but it should be noted that the rapid economic growth generated many investment opportunities within the Japanese economy. This fostered an environment in which large-scale investment could be made in plant and equipment to accommodate new technologies. Without this, the Japanese corporation would not have been able to realize its higher rate of productivity no matter how much effort it made to create conditions suitable to such an improvement.

It should also be noted that the modern Japanese economy is heavily based on foreign economic management practices, especially from the United States. In many cases, attemps to introduce American labor and employment practices met with failure, but such methods as IE, VE, and ZD were successfully absorbed in the mid-1950s and continue to make a major contribution to the Japanese economy today. Nor should it be forgotten that there was a time when the factors contributing to higher productivity, such factors as lifelong employment and seniority-based rewards, above were criticized as being feudalistic, inefficient, and irrational.

There are drawbacks to be sure. For example, the seniority system, while it does avoid the development of severe individual competition, is also detrimental to the motivation of workers, especially young workers, although this aspect is somewhat mitigated by the delegation of decision-making authority to subordinates. The lifelong employment system obstructs rational distribution of employees and can lead to ineffective use of an employee's capabilities within a specified corporate system, despite measures to promote the development of employee potential. It also makes it difficult for an employee to leave a corporate system to which he is not suited. The difficulty the shareholder has in applying pressure or checking management activities, and the combination of this with wide discretion in management policies, has tended to lead to a rather easy-going management attitude within Japanese corporations.

As a result, even the widely acclaimed Japanese management system displays certain shortcomings, especially when compared with the American management system. Nevertheless, while it is impossible to advocate the introduction of these Japanese management methods and their supporting corporate climate lock, stock, and barrel in other countries, it would be an oversimplification in the opposite direction to contend that the social and company climatic factors which have contributed so much to raising Japanese productivity are irrelevant or inapplicable elsewhere.

An overall comparison of American and Japanese management practices reveals that the American system is better for short-term competition and the Japanese system for long-term competition. If the management of a corporation were to be judged by their performance in only one year, the American corporation could, in principle, fire all of its employees and procure new managers and laborers from the employment market who would be more suitable for the work required.

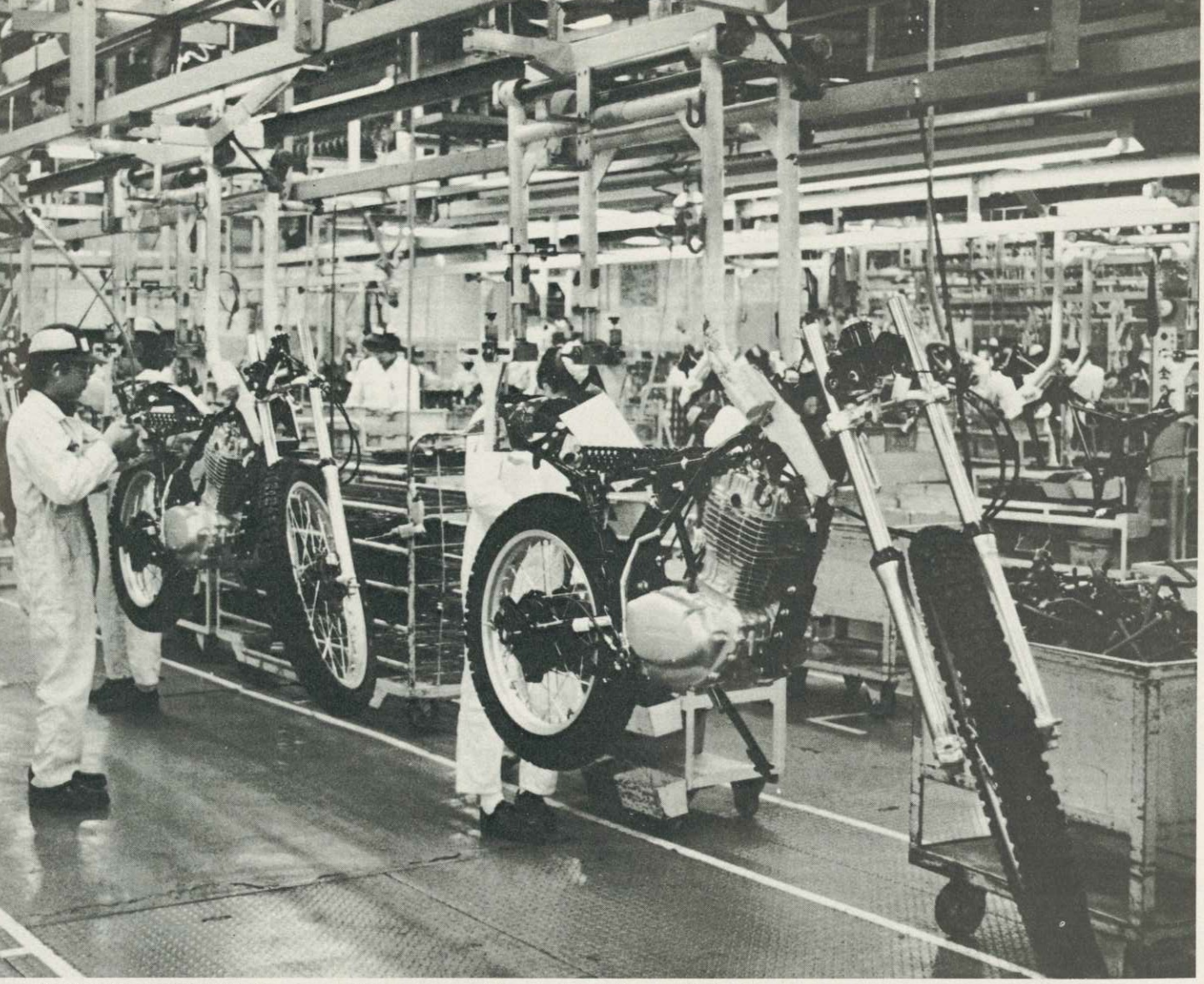
A top-down decision making process is extremely swift as well as resolute. And meticulous job definitions according to a work manual make it possible to organize random laborers on very short notice into a systematic production process. This is quite contrary to the Japanese system in which a production team must develop close interpersonal relationships before it starts functioning properly.

The weak point of the American system —or the strong point of the Japanese system, if you will—shows up best in the long term. This is evidenced by the very opposite assessments of the institutions and practices characteristic of Japanese management depending on whether they are being examined over the long term or the short term.

As has already been stated, the superiority of the Japanese management system lies in the ease with which it is able to make investments in plant and equipment and facilites and to adopt innovations that will only bear fruit in the long term. The American system, which is based on a rigorous profit-making principle, is probably more suitable for short-term rationalization.

By hindering severe individual competition, the seniority system may actually contribute to creating a rather "lukewarm" atmosphere within the corporation. However, in the American system a gap develops very early on between the elite who make it to top positions and the "mass" of employees who do not and whose morale is the lower as a result. The elite, who number only a few, work incredibly hard, but it is the will to work and capability of the greater "mass" of employees which will have a greater effect on the total industrial society.

Competition is not as severe within the seniority system as it is within the United States, but it does exist. It just does not classify employees or create wide gaps between them in its earliest stages. The difference between employees only becomes



Honda Motors immediately takes up suggestions and proposals from workers in its assembly lines.

evident over a long period of time during which the employees are evaluated in stages and eventually promoted to higher positions. In the Japanese system, therefore, a maximum number of workers become involved in an extremely long-term competitive process which makes full use of their maximum potential and energy. In this manner, the seniority system actually promotes competition over the long term, even though it seemingly discourages it in the short term.

The same criticism can be applied to the lifelong employment system. It certainly seems more efficient to hire a worker with the skills required for a certain job from the job market when he becomes necessary. In Japan, the laborer is tied to the corporation, and the corporation to the laborer, once he is hired. No matter how unsuited the laborer's skills are for the latest technology, it is impossible for the corporation to fire him simply because he is useless. The corporation is left with no alternative but to make the best use it can of such an employee. The job rotation system, in which employees are rotated among different jobs in order to obtain broad-based experience and a wider perspective, has evolved in an attempt to counteract this problem. The job rotation system encourages the employee to develop the capability to expand his own skills.

A system in which laborers are replaced like machine parts might be highly effective in the short term. But we are in an age where robots and NC technology are gradually replacing humans with machines for simple jobs. Productivity will eventually be differentiated by the application of "subjective" skills rather than "objective" technology. It would seem more effective, then, to encourage the development of human resources that are flexible enough to adapt to new technologies. Such flexibility is more likely to place a company in a superior position in the long run.

If Japanese and American management systems have their different advantages and disadvantages depending upon whether they are being judged by short-term or long-term goals, then it is logical to assume that the two systems will also vary according to the type of industry in which they are being applied. In simplistic terms, the Japanese management system is better suited to industries developed on the basis of long-running plans which require major investments in capital equipment and continuous technological innovation. Such industries must rely on the skills of highly trained labor. On the other hand, industries based on simple labor probably operate better under an American type of management system.

So-called Japanese employment practices first took root in Japan within the heavy industries after World War I. That these employment practices are seldom seen in the supermarkets and other types of commercial businesses in Japan may well be a clue to the appropriateness of such practices to certain fields but not to others. Yet despite such differences, Japanese practices seem to be more closely tied with the development of a corporation, so long as that corporation is a going concern. As long as this is true, the Japanese management system seems generally superior. ●