*Japan Review*, 1998, **10**: 199-218

# Transferring Corporate Japan Overseas: Suzuki in India

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In recent years certain features of the Japanese management system and work practices have come under criticism both from within Japan and from overseas. Relying on a case study, this paper analyzes the process of transfer of Japanese management system and work practices. In 1982-83 India selected the Suzuki Motor Company as its technical partner in a move to modernize the stagnant Indian automobile industry, and caused a 'small revolution', both in the technological sphere as well by the introduction of Japanese management system and work practices. This paper discusses the scenario during the start of the project and also takes into account the metamorphosis of the Japanese work practices into Maruti style. The study is based mainly on extensive interviews with Japanese and Indian personnel, as well as my work experience at Maruti from 1990-1992.

*Key words:* JAPANESE WORK PRACTICES, TRANSFER OF SKILLS, 5S, 3K. KAIZEN, SUGGESTION SYSTEM, ON-THE-JOB TRAINING

This paper is based on my Ph.D. thesis–"Socio Technological Issues of Technology Transfer: A Specific Case Study of the Maruti-Suzuki Collaboration"–submitted to the Graduate University for Advanced Studies, Kyoto, on Nov. 6, 1996. The research took four years and enjoyed the generous support of Monbusho, The International Communication Foundation of Japan (ICJ), and the International Research Center for Japanese Studies.

## INTRODUCTION

Any visitor to India cannot help but notice the abundance of the 1980s Suzuki Alto car. Yet, a closer look reveals these cars to be Indian Maruti-800s. This model took the Indian market by storm, dominating the Indian roadways and also capturing the affection of consumers. Most of the literature related to Maruti and Suzuki, whether in Japanese or in English, explains in detail the elements of the Japanese organizational practices that have been implemented at Maruti and goes to great lengths in trying to convince readers that the project is successful beyond doubt. I do not necessarily deny such a claim, but I have chosen to look at the case more objectively through an analysis of my findings. The study also provides an in-depth look at the changes that have been observed by the employees themselves through the years. A large part of the study has been influenced by my work experience as an interpreter at Maruti from May 1990 to September 1992. At that time I was a participant to what was going on around me, and not a researcher. I also had the opportunity to carry out three field studies between 1993-1996. One was of a week's duration at Suzuki, and two subsequent studies at Maruti of five weeks duration each. In the latter I obtained permission to join Maruti as a vocational trainee, giving me free access to the company. The main research methodology I followed is the long interview method. I must

emphasize that my previous work experience gave me a distinct advantage with such a methodology, since I did not have to go through the painstaking process of developing relationships of trust with the employees, with whom I already had a good rapport. I should also note that sometimes I found myself caught between the conflict of responding to situations as any other employee, and being an 'objective researcher'. I hope I have been more faithful to the second. What follows in this paper is an attempt to recreate the scene that accompanied the transfer of skills and work practices in a comprehensive technology transfer from Japan. The paper focuses on the shop floor and the workers who form a core part of production. Adding direct value to the product, these are the people who put in pure physical labor day after day, year after year. Although, very often they are taken to be just a cog in the machinery of production, they are in fact, also the people who think, feel and react to situations.

One of the legacies of the Indian colonial past was that 'Made in India' passenger cars were sadly lagging behind in technology and modernization. Existing car makers churned out fuel guzzling antiquated models based on old British designs. In such a manner of production, cars remained a luxury consumer good— at least until the end of the 1970s. Added to this was the fact that in the period immediately following India's independence from almost two centuries of British colonization, the Indian government obviously was not keen on taking up the automobile industry as a part of its development plans. Cars were considered to be a luxury good. Rather the Indian government took overprotective measures to protect its domestic industries by denying foreign investment in areas that it considered contributed little to building up a local industrial base and other socio-economic objectives. Total Self Reliance (TSR) was thus the key slogan for several decades after independence, and as long as a certain product could be produced domestically, its import was discouraged by licensing restrictions and strict tariffs.[1]

In 1982, Suzuki Motor Company of Japan was selected by a special committee set up by the Indian government to become a technical collaborator with Maruti Udyog Ltd. in India. Among the competitors were also several world renowned automakers like British Leyland, Fiat, Renault and Peugeot, Mercedes, Volkswagen, Mitsubishi, Nissan, and Daihatsu. It proved to be a most successful collaboration. Maruti now holds over 70% of the market share in India for passenger cars and is one of the biggest Indo-Japanese collaborations that has been established so far. The establishment of Maruti ushered the 'small car' technology to a stagnant automobile sector in India. At the outset the management of Maruti and Suzuki were unanimous in their decision to introduce Japanese management techniques and work practices (also referred to as the work culture). The Chairman at that time, V.Krishnamurthy, was convinced that in order to launch the new, expensive and first small car project involving modern Japanese technology it was imperative to introduce the Japanese management system too. He believed that this was the valuable software that would enable the production to progress in a successful manner. Instead of only introducing the hardware technology they wanted at the same time to introduce Suzuki work culture. Thus without being selective, the management practices were applied to the Indian conditions.

Excitement brimmed in the new company at the start of the project that involved a brand new company with ambitious targets to play the vital role of modernizing the passenger car technology in India. Since Maruti had no previous manufacturing experience, it started its

existence on a clean slate—at a 'greenfield' site. Most of the employees recruited were very young—the average age being 25. This was an astute move on the part of the Maruti and Suzuki management, who played on the fact that it is easier for amateurs to accept new ideas and learn new systems. Thus the adoption of new organizational practices would not be hampered by entrenched attitudes on the part of the workers. Since the Indian top management were very keen to introduce the Japanese management system, the technology thus came nicely wrapped with a package of the typical features that form an inseparable part of Japan incorporated. So what were these and why did they cause an uproar when introduced into Maruti?

## Transfer of Japanese Work Practices

Japan's economic development in the 1950s fueled an interest in Japanese management practices. Popular views emphasized the role of the Japanese management system and thus fueled an interest in the efficacy of Japanese management techniques. It came to be widely believed that the formation of this success is provided by a system of collective and group effort that has been continuously improved upon and perfected with patience and perseverance. As more attention was paid to the success of these techniques, the debate turned to whether these could be transferred to other countries that wanted to use the Japanese model. Several case studies have illustrated the successful implementation of the Japanese system in the west, of which the well known examples are NUMMI and Honda in the United States, and Nissan in the United Kingdom.[2]

The feasibility of transferring Japanese industrial practices for overseas implementation has generated serious debate. One concerns the notion that "Japanese management techniques have been devised and have been developed in Japan's indigenous social climate and environment".[3] Hence it is difficult to transfer them to culturally distant environments. The concept of the environment is more complex and can include anything from the country's history, its national characteristics, the various institutional factors such as the education system, the infrastructure or social structure.

There can be major shortcomings in the manner in which Japanese strategies and techniques have been copied by other firms.[4] Various elements that make up the Japanese production system have been introduced by many companies as 'isolated concepts' and then often set up as a new department. Snowdon feels that this is more representative of the American attitude. Some typical examples are the introduction of Quality Circles, and the *kanban* system. The latter is usually one of the tools for the Toyota production system that is commonly known as the Just-in-Time system. There is a tendency, he feels, "to copy directly without properly assimilating techniques", i.e. the 'factory tour' or 'read-a-book-about-Japan' approach. For example, it took Toyota itself almost twenty years to perfect the Toyota production method, and what we see today is something that has been carefully worked upon and improved incrementally.

In the following sections I examine Maruti's initial introduction of work practices from Suzuki.

## What Was Actually Introduced by Maruti

The decision to introduce Suzuki's management system and work practices was undertaken voluntarily by the Indian side, and was not forced by the Japanese team. This is an important point, since Japanese firms are often censured for forcing their work practices on the technology recipient side. The actual implementation of these practices was possible because of the efforts of the Japanese advisors assigned to Maruti, some of the senior executives and managers who received initial training at Suzuki, and members of the top management of Maruti. The most important practices that were introduced include:

- An open office policy where over 50 occupants sit in the same office. The presence of managers who naturally share the same table as their staff enhances information sharing and lessens the presence of hierarchical barriers which are often strong in India. In this situation managers can respond instantaneously to staff input. Since there are many groups in the same room, managers can easily communicate with each other. The implications for enhanced communication were profound. A few private meeting rooms existed, and these are used solely for the purpose of discussion with clients, or for occasions when privacy was necessary. Less tangible but also important is the spirit engendered by the office with no walls.[5]
- A common staff uniform for all the employees including the top management.[6]
- A common self-serve canteen catering to all employees from the line workers to the management with the same menu for all.
- Arriving at work ten minutes early, for morning exercises. The Japanese put much stress on punctuality not only in the factory but in every sphere of their lives. In the factory it means that work starts within a minute of the siren blowing. On the shop floor, workers are expected to be present at the line at least ten minutes in advance, giving themselves sufficient preparation time to change into work clothes and check that the tools are in working condition.
- Shop floor meetings before the start of a shift to improve communication. A very typical Japanese shop floor custom called '*chorei*', which translates as morning meetings of five to ten minutes duration. During this time the supervisor conveys to his group, i.e. his '*han*', the day's target, and reports on the targets achieved and any problems or abnormalities that occurred in the previous shift.
- Quality Control activities.
- A system in which improvement and cost reduction are encouraged and rewarded through practices such as Q.C. and suggestion systems.
- Stress on maintenance of a clean factory by the introduction of 5S, 3G and 3K. The 5S are "*seiri*", "*seiton*", "*seisou*", "*seiketsu*" and "*shitsukei*", which translate as cleanliness, neatness, orderliness, arrangement, and discipline. The 3G stands for "*genba*", "*genbutsu*" and "*genjitsu*", the literal translations of which are workplace, the actual object and the actual conditions. In essence, 3G represents investigating a problem at its source. This requires the person in charge to visit the site personally and not rely on second hand information provided by his office staff. 3K stands for "*kimerareta kotowo kihondoori kichinto yaru*": what has been decided should be followed strictly according to the standards.

- Suggestion System and Kaizen: Kaizen means improvement and involves everyone including the managers and the workers. In fact Kaizen is better explained as a philosophy that explains that the way of life needs constant improvement. Suggestion is a part of Kaizen and it encourages employees to feel free enough to offer any suggestions for improvement of their work place or cost reduction. Both these practices took off rather successfully in Maruti within a few years of their introduction with active participation from the workers. Kaizen and suggestion activities testify to the importance given to incremental improvement by Japanese companies.

However, the decision to introduce Japanese work practices did not meet with immediate success—a result that did not surprise many. The idea of introducing staff uniforms, the open office policy, and a canteen for common use, in fact, caused a furor at first. The middle management rejected it initially. Most of them had been freshly recruited from public and other private sectors where the usual system is to allot private rooms to the executives. The desire for recognition of one's status is a common feature not only amongst executives and managers in Indian companies but in their Western counterparts too.[7] The Japanese, on the other hand, urge that each employee should nurture the feeling of 'oneness' with the company. This is made evident by well known features such as a common uniform, open offices to improve communication, after-office eating out and drinking sessions—all aimed to improve communication. Overtime, as well as coming to work 15 minutes early, are also part of the milieu. In Maruti, most of the workers, unlike their Japanese counterparts who have their own conveyance, commute to work by the office's buses. Should the company desire that they stay and work longer hours there are no alternate transportation facilities. Thus it was not surprising that the Maruti workers were unwilling to stay on after office hours for Q.C. activities, or arrive early to the office on their own. However, this was not exactly a violation of Japanese work practices as some of the Japanese interviews seemed to suggest.

While talking of transferring certain management practices, the social and cultural environment within which these management and work practices took shape should be taken into consideration. This brings to mind a revealing discussion with an employee of a medium sized firm producing children's garments, in Osaka. Most of the employees are women, and the plant follows very strict quality control regulations. Yet during the *chorei*, as well as a similar meeting after the shift is over, even if there was nothing of import to discuss, the employees gather in groups to show their respect to their company slogan after their leader announced the word *Mokuto* (silent prayer). The question we need to ask here is whether it is really necessary to introduce practices aimed at developing total devotion to the company under the guise of *chorei*. The *chorei* of the kind I have just described would probably not work in an Indian firm. As a matter of fact, the practice of morning exercises has been discontinued in most of the departments at Maruti.

## Capability Building in the First Phase: One-to-One Transfer of Technology at the Shop Floor Level

The development of the Maruti project took place in two phases. The weld shop, followed by the paint shop was installed after the establishment of the assembly shop. In the first phase the facilities for assembly, weld and paint were set up. The assembly shop was established in November 1983, where the components to be assembled were imported from Suzuki in semi-knockdown (SKD) form. At that stage Maruti was just beginning to develop component makers. Assembling basically involved fitting low-technology and value components like tires, batteries, electric wiring, wheel rims, seats and glasses.[8] This meant that the painted body had to be imported from Japan. Any paint or weld repairs of defects that the body may have sustained during shipment from Japan were repaired within Maruti, for which special facilities were set up. Eight months later the paint and weld shops were set up in the second stage of indigenization. SKD components, which were higher value parts, had until then been imported from Suzuki. Once the paint and welding processes were carried out in-house, it enabled Maruti to go in for a higher level of indigenization, and these parts were replaced by lower value parts, i.e. complete knockdown (CKD). Thus emphasis in the initial stage was clearly more on the indigenization of the processes.

The Japanese advisers, who are the bearers of technology, are at a distinct disadvantage because of the language barrier. This is because very few of them speak either English or the local dialect. Before being assigned to their posts in India, or for that matter any country in which Suzuki has set up production, they are only given a minimal briefing about their destination country by the Suzuki head office. When Maruti started functioning as a company, there were approximately 500 employees. As mentioned earlier, the majority of the technicians whom the company hired had no prior work experience in an automobile firm. Thus it was necessary for the Suzuki advisers to teach advanced technology to the amateur shop floor workers on one-to-one basis.

The immediate problem faced by both sides, however, had nothing to do with 'technology' as such. Neither side could speak the other's language, and there were insufficient interpreters to bridge the gap in communication. Documents and specifications in Japanese had to be translated into English and Hindi to enable the workers to understand the content of their work. Therefore the Suzuki shop floor adviser would teach an Indian worker by demonstrating how to do the job, have the worker do the same task, then correct his mistakes. They repeated this process until the worker mastered the technique and got acquainted with the tools. In the absence of interpreters, each side tried to overcome the language problem by resorting to gestures and drawings. The Japanese trainees were adept at drawing and sketched what they couldn't express in words. Most of the Suzuki advisers reported that the inexperienced Maruti workers were eager to learn, and willing to accept what they were taught without resistance or bias.

This method of teaching involves the actual flow of knowledge, which is different from simply the transfer of information, and thereby more effective than just handing over the manuals. However, there could be several practical reasons for employing this manner of teaching. Firstly, the manuals and operation standards were still in the process of being translated into English. Secondly, the production target had already been set and all

preparations made to meet this target. The fact that there was a language barrier, on the contrary, proved to be advantageous at times. Clearly, communicating with a person who understands one's own language is less time consuming than communicating with gestures to someone who does not. In the latter, it is necessary to spend more time with the person, to actually do the work oneself and wait until he attempts it, and then perhaps repeat this process several times until the latter finally acquires the necessary skill. The result is that, since the number of workers was less during the initial stage, they had the chance of being taught directly, in a correct manner, and almost on a one-to-one basis by the Japanese advisers. Much of the knowledge that is transferred to the workers in this kind of teaching is tacit and is not always embodied in manuals or specifications, and is thus transferred much more effectively by a closer interaction.

Japanese experts mentioned in an interview that they taught simply what they knew. Put another way, these trainees were not preaching any specific Japanese model as such. They merely taught what they had internalized through their long experience at Suzuki. Workers directly taught by these advisers speak highly of some of those who went out of their way to make efforts to ensure that the skills they possessed were transferred in the right manner. Overseas Japanese firms are often accused of forcing their traditional work practices on the recipient firm. In an interview regarding this, a Japanese adviser said:

> "Our role was to teach the workers who are directly involved in production, and we feel that we have taught them whatever we knew and whatever we had experienced with respect to production at Suzuki. Although we had no intentions of pushing the Indian side to learn the Japanese system, at times it may have seemed as if we were forcing our system on them. This is because we do not know of any other system than the one we have always known in Japan. But had we not done it that way, the first lot of the vehicles that Maruti produced would probably not have been of a quality that was at par with Suzuki's."

In the process of teaching or transferring the knowledge, there were times the Japanese advisers also used 'scolding' as a form of communication with the Indian workers, in order to reinforce learning. As one of the Japanese advisers urged, there are several ways of teaching: requesting someone to follow the way he has been taught, ordering, and at times, scolding the worker to impress upon a point. It would make him ponder over why he was scolded and that would make him more careful next time. He stressed that human relations are very important and his relationship with the workers is still very good.

While teaching the Maruti workers, even after fulfilling the role of teaching, the Suzuki advisers would check to make sure that they understood the process thoroughly. Although interpreters were available, their number was not sufficient to ensure that each Japanese on the shop floor had constant access to an interpreter. Nor is using an interpreter a fool-proof method, since it takes time for the respective interpreters to get acquainted with the technical jargon of different shops. Thus at the initial stage it was a learning process for the interpreters too. The supervisors themselves were inexperienced and had to learn the job themselves first. By that time, however, some of the Indian engineers and supervisors had already received training in Japan under the Association for Overseas Technical Scholarship (AOTS)[9] program, and thus could get involved with the Japanese advisers in the teaching process. They had also picked up a smattering of the Japanese language while on training to Suzuki and at times

acted as interpreters when the trainees wanted to communicate something to the workers. A senior Indian supervisor commented that there was a high level of commitment from the Indian supervisors too, as they taught the workers alongside the Japanese advisers.

The training started off with a drilling of 5S, which from a popular slogan in a model Japanese factory. I was told that for the first month everyone, including Maruti engineers, workers, managers and the Japanese advisers, participated in a spirited cleaning of the whole shop floor.[10] It was an excellent example of 'learning by doing'. Even the managers agreed to clean up the work place. It was chiefly to show others and set an example, and it worked well to motivate the workers. Certain processes in car manufacture, for example the process of painting, are greatly affected by atmospheric dust and dirt. An orderly arrangement of tools and jigs is also important for the smooth operation of the work processes. Besides, it also provides a positive atmosphere and improves efficiency.[11] As Maruti was going to produce cars by means of mass production, instead of batch or small lots, the importance of maintaining a clean factory had to be impressed upon everyone.

Most of the teaching started with simple repair work. In the paint and the weld shops, this involved repairing the defects of the semi-knockdown components caused during transportation from Japan. Since the number of workers was still small at that stage, the Japanese advisers from Suzuki in charge of every line were able to conduct Q.C. meetings in small groups, where the discussion revolved around problems related not only to technology and quality, but also on the context and significance of the job with respect to the whole process. In this way workers were made to realize that each small step was an important contribution to the whole production process. The importance of safety measures was also stressed. In the assembly shop the first batch of workers were divided into three categories to handle the trim, underbody and the final lines. They received their very first training from supervisors who had been trained at the Suzuki plant, and a couple of Suzuki's advisers. This was a good example of on-the-job training. Since the conveyor line had not yet been completed, workers assembled two dummy vehicles off the line. Initially they simply watched the supervisors and familiarized themselves with the tools. Later, workers in the respective groups assembled a vehicle for the first time under direct supervision. There were only 20-25 workers in the assembly line and they acquired the skill by assembling, dismantling and reassembling the same vehicle several times. This helped them acquire the following skills: identify the parts, tools, consumables, torque wrenches, jigs and, most importantly, the process sequence.

A Suzuki adviser, who had twice been assigned to Maruti, stressed the gap between Suzuki's 30-plus years of experience in car-making with Maruti's. According to him it was very important for the Japanese advisers to train their Indian counterparts during the initial stage in a manner as if they were teaching beginners, instead of taking a superior stance. Consequently, most of the standards followed at Suzuki were rewritten in a simplified manner and translated into English or the local language Hindi, to communicate the information to the workers.

## Difficulties in Introducing the Japanese Style of Working

• *Punctuality*

The Suzuki advisers found it difficult to impress upon the Maruti workers the significance of time. For example, since the work started at 7:15 am for the morning shift, the workers were expected to be at the site at least five to ten minutes in advance and not arrive just when the line started to move. They also had to get used to the fact that they should not pause between work and leave the line, except during a break. If for some reason they absolutely had to leave their work site for a few minutes they were expected to inform their supervisor, or have someone fill in.

Maruti workers seemed to find it difficult to imbibe this kind of diligence that their Japanese counterparts demonstrate. It was not that the Indian workers were not hard-working, but they found it difficult to adhere to the 'eight hours on the line' schedule without resorting to an occasional short break. For most of the workers at Maruti it was their first experience of working with a moving conveyor, instead of the 'batch' or 'lot' production, and they were not used to such a style of working.

• *Unauthorized absence*

The attitudes of the Indian workers towards attendance was quite different from that of typical Japanese workers. The latter considers himself to be a part of his work group and is conscious of the trouble that he would be putting his co-workers to by taking unannounced leaves. He or she thus gives prior notice that enables the supervisor to adjust for the absence. This is very important for production to run smoothly. Usually the allocation of workers is done in advance. If too many people simultaneously take leave without advance notice, shop production is likely to suffer affecting the overall performance. The worker allocation plan would have to be changed in a hurry in the morning if several of the expected workers are absent without notice. As a result, on the days with greater unplanned absenteeism, the defect rate is higher.

• *Stopping between work to take a few minutes rest*

Some of the Japanese advisers were critical of Maruti workers, who they thought lacked diligence. A noticeable feature of any Japanese shop floor during working hours is that there are very few people loitering. Workers continue to remain at their work site no matter what. On the Maruti shop floor, however, it is not uncommon to see people moving around freely. The long hours of monotonous work on the production line of the kind that Japanese workers are expected to perform has come under criticism in recent years and there have been attempts to 'humanize' the production system.[12] Maruti workers on training to Suzuki confessed that they found it very difficult to work for long stretches that included overtime, without taking an occasional short break. Although they had adjusted to the grueling pace within one week or two, they were doubtful of being able to sustain it once they resumed their responsibilities in Maruti.

Some of the Suzuki advisers who had a chance to observe these same Maruti workers agreed that it was surely difficult for them to adjust to the pace of work on the Suzuki shop floor, unaccustomed as they were to working in this style. In fact, the complaints were not

only from the Indian workers but also from other overseas workers on training to Suzuki. "Hungarian employees bristle about Suzuki's team mentality. Those brought to Japan for training have rebelled against the long hours and intense drilling. They thought they came to work eight-hour days, but we brought them here to learn—no matter how long it takes," says Suzuki.[13] "It was a culture shock for everyone". However, once the Maruti workers had adjusted to the pace, they performed as well as any of the Japanese workers at the Suzuki plant at Hamamatsu in Japan.

• *Lack of concern with the previous or the next process*

The Suzuki advisers were dissatisfied with the Maruti workers' lack of concern with the previous or the next process. In a mass production system, the conveyor line continues to move through different shops classified into press, weld, paint, and assembly. Each of these shops have a myriad of sub processes that the car body is subjected to until it reaches completion. However, the workers seemed involved only in their own work area and uninterested in what is going on in the previous or the later processes.[14] Ordinarily this would be the accepted and normal thing to do in a work environment involving detailed job descriptions. The work that Japanese workers are expected to perform is not clearly defined, and thus there are no detailed job descriptions for an individual.[15] It is deliberately left undefined, because each worker is expected to be able to handle any problem that may occur, and this includes problems that are outside the framework of the work to which he is currently assigned. Through job rotations he is expected to gain an overall knowledge of related processes.[16] Kazuo Koike discusses the results of this sort of division of labor and distinguishes two types of systems that arise from it—'separated system' and 'integrated system'.[17] Besides, the Japanese worker is also trained to take care of simple maintenance and repair of the equipment and tools that he handles. His career path involves the opportunity to work at different jobs as he is rotated from one 'group', or *kumi*, to another.

At Maruti, the English and Hindi translations of the Suzuki Operation Standards (SOS) are displayed in each work area. These are known as the Maruti Operation Standards (MOS). Any change or improvement to an operation or process is then incorporated into the MOS. The worker is thus aware of the exact nature of the job and the degree of responsibility that is meted out to him. There are no grey areas regarding the nature of their responsibilities. This occasionally gave rise to situations when a worker, reprimanded for not correcting a defect that had originated in a previous process, answered in a nonchalant manner "that is not within the scope of my work, so it is not my responsibility!"

A possible reason for this attitude could be that at Maruti, workers are not trained in simple maintenance, an area considered to be the sole responsibility of the maintenance department. For example, the assembly shop workers are only allowed to carry out uncomplicated maintenance, like repairing of jigs or knobs. If there is a problem, for example with a pneumatic gun, the most he would try to do is to oil and tighten the knobs and leave the rest to the specialized person. Thus there is a lack of responsibility regarding what is going on in the previous and the next processes, as long as the process they are directly in charge of is working satisfactorily. This kind of attitude can be attributed to a system where there are strict job descriptions. This way, the workers know the limits of their responsibilities. Consequently, a voluntary attempt to do something that is outside the scope

of one's work may incur displeasure or rebuke from their superiors. This was confirmed by the feelings of some of the Maruti workers interviewed at Suzuki:

> "We feel that we ought to have some knowledge regarding the maintenance of the equipment we handle. Line technicians are not taught about this at Maruti, whereas here [at Suzuki] all the workers seem to be trained. I use a robot for the brake sub-assembly and whenever there is some problem with it, the Japanese worker on the line beside me tries to set it right; if he is unable to, he calls the *hancho* (group leader) and then the *kumicho* (foreman). Only as a last resort do they seek the help of the maintenance. In Maruti, we first stop the line and call the maintenance people because we know nothing about the equipment. Suppose we try to repair it and this leads to further complications, then we would be blamed for it and told off for tampering with it, instead of calling in the maintenance."[18]

In contrast, equipment maintenance in Japan is more flexible since the line workers handle routine preventive maintenance and minor breakdowns, and often will assist the maintenance workers when their help is called upon during a problem.[19] This pattern is considered quite natural since it is the workers who are the most knowledgeable about their own job. Thus it seems that in this aspect the manner of working followed is not exactly the Japanese style.

• *Importance of the vertical relationship within the shop floor*

A strong relationship based on trust and loyalty exists between the shop floor workers, their supervisors (*hancho*), the foreman (*kumicho*), the manager (*bucho*) in Japan. There is no visible status difference in their attitude, and they interact with the workers as colleagues, at the same time playing the role of a mentor. In return, the workers obey them and strive to maintain the teamwork and group harmony. Not only the Suzuki advisers, but also the Indian workers interviewed regretted the non-existence of such a relationship at Maruti. The latter commented that there is a 'direct link' and managers are easily 'approachable' to the workers, without anyone having to go through 'go-betweens'. The following comment by one of the Maruti workers on training at Maruti illustrates a desire for better communication with their superiors on the shop floor:

> "All department managers should have direct links with workers. Usually the supervisor or the line-in-charge acts as a go-between. Here at Suzuki they talk to the workers directly as a 'friend'. In Maruti, the intangible feeling of 'I am the manager and you are a worker' is rather strong. Earlier, this attitude was much less prominent but now the gap has increased—so has the gap between the supervisors and technicians..."

The interviewees cited some instances of exemplary managers at Maruti who went out of their way to improve communications on the shop floor. The workers felt that their efforts should be recognized and acknowledged. They felt that even occasional praise from their peers goes a long way towards making them feel that they have an important role to play rather than just being a 'tool' in the intricate mechanism of the production process. There were a few managers who possibly realized this and made it a point to listen to their problems. Moreover, such a manager would sometimes single out a worker and hand out an important task to him just to give an opportunity to prove his responsibility.

The interviewed workers talked enthusiastically about a certain Indian manager who had

been popular with the workers during his tenure as a manager of the assembly shop. He concentrated his efforts on improving communications within the shop floor, and made it easier for workers to approach him directly and speak out their problems. He also encouraged them to discuss their problems with him during tea breaks, and made it a point to act promptly.

> "We need such kind of persons in Maruti. See, if problems like defective components get solved in 30 minutes or so, then we too would feel like working. You feel that someone is listening to you."[20]

This manager made a point to praise diligent workers and sometimes took the Japanese adviser to the line and introduced workers individually with a word of praise. He went so far as to assign a technician to a production line and asked him to reach the required target production, and to report to him directly should there be any problems with components. This was a good challenge for the technician. There was a temporary line that had been newly installed in the assembly shop and he put the technician in charge of that line, giving him the freedom to choose the workers to work with him on that line.

Here one notices a difference between Japanese workers and the Indian ones. The former are willing to do anything if it benefits the company, thus to that end they would cooperate fully. The Indian worker on the other hand gives more importance to himself, and if his ego is satisfied by praise or reward or some such incentive, then he would be willing to do any kind of difficult job and do it well. Srinivasan has summed up the nature of the Indian worker in the following way:

> "In contrast, an average or typical Indian worker, who is much influenced by the Hindu way of life and teachings, prefers to keep his identity as an individual. He shows loyalty and belongingness to his family rather the organization or the society. He is self-centered and driven by Ahum (the first person I). Self and family are given more importance than the organization. A group is treated almost as a federation, the members continuing to act as individuals. The lack of cohesiveness in groups is magnified whenever there are regional, linguistic, caste and religious disparities. The individualism is so dominant that in group decision-making, members play a 'win-lose' game rather than compromise, and arrive at a consensus."[21]

## Conflicts on the Shop Floor

Friction on the Maruti shop floor arose mainly because the trainers were adamant that the workers follow the rules of production strictly, so that quality was not affected. Let us look at a concrete example: the production line is supposed to run at a particular speed. Increasing the speed would no doubt yield a larger output, but at the same time would affect the quality, unless the workers in charge of the line are highly experienced. At times there seemed to be a wide gap between the management philosophy and their actual actions. While professing to emphasize 'quality' as a company motto, the top management would inevitably respond to the market demand for a higher number of vehicles. Yet a compromise has to be made at some point or other. Which means it is an undeniable fact that once emphasis is put on the quantity of vehicles to be produced, no amount of Japanese work practices could completely prevent defects from arising out of a higher line speed that the workers were asked to resort to, in

order to cope with meeting the production target. The 3K's as mentioned above, can often go flying out of the window when you have the production department struggling to achieve the target. Caught in the midst of all this was the worker trying to please both sides. As one worker summed it to up in an aside during one such heated session between the Japanese trainee and himself : "I'm paid an incentive for the number of cars I produce, so why should I be overly concerned with quality?" Not only for the shop manager, but also for the workers, it must indeed have been a difficult situation to be caught between the management's demand for higher productivity and the Japanese advisers' emphasis on quality. Tense situations occurred occasionally, and one cannot help but admire the tenacity of some of the Japanese advisers to stick to their principles—they often stood watch on the line to check that the line speed was not increased unnecessarily. What then is the solution to all this? It is not the introduction of Japanese work practices or the lack of it that is an issue here. This issue is addressed later on.

The interpreters at Maruti played an important role. They formed a crucial bridge in transmitting not only technical information from one side to the other, but also took on a supplementary role of painstakingly explaining to both sides the differences in culture and society that were responsible for certain behavioral patterns. Many times it was the interpreter who diffused a situation that threatened to become explosive with both parties too angry to have control over what they were saying. At such times it was a blessing that there was a language barrier between the trainees and trainers after all. However, despite such friction a strengthening of ties between the two sides often occurred because everyone was intent on achieving the same objective.

One word about the external environment. It should be kept in mind that the external environment can have a great influence on the production planning. The balance between quality and quantity would tip towards the latter when the customers are impatient for the product, and the market does not offer much of a choice. Maruti was lucky that during the first decade after its establishment, it had a monopolistic hold on the market since the rest of the Indian car makers were in no position to be competitors of any kind. The situation however changed drastically from 1993 onwards, when several foreign makers began their production. Almost overnight Maruti's policy changed to put emphasis on quality—the time was now here when a customer would find a speck of dust on the shiny Maruti cars and turn nonchalantly away to models offered by other makers.

### Changing Trends in Motivation and the 'Will to Work' Through the Years

The Japanese advisers that I interviewed had all been technical trainers to Maruti during 1982-1983, the commencement of the project. They had also, in subsequent years been assigned to Maruti on a semi long-term basis of six months to one year. They were thus in a pertinent position to evaluate any changes that had occurred, and ascribe causes to it based on their first-hand experiences.

According to the interviewees, it had been much easier to train the workers at the beginning of the Maruti project. They seemed to have the *yaruki* (motivation) of the typical Japanese worker, and had been willing to listen to the Japanese advisers with an open mind. The 'spirit of challenge' felt by the engineers, managers and top management also filtered

down to the workers. Maruti, being a completely new company—the first of its kind in India—had started with a fresh project. In spite of some initial resistance, it was willing to try new ideas. It is no exaggeration to say that nationalistic feelings were at work among the Indian employees, who wanted to make the project a success. There were only around 500 employees at that time, compared to 4840 in April 1995. Since the production volume was much smaller, there was a Japanese adviser assigned to each line in a process. These advisers could thus devote more time to teaching the Maruti workers. Some of the interviewees confessed that they had been genuinely surprised by the fact that, although at that time the level of automation was much lower, the first set of cars produced were of very good quality, comparable to that produced by Suzuki in Japan. Furthermore, it achieved this level notwithstanding the fact that the initial production was carried out in mid-summer which happens to be a season of frequent dust storms in the area where the plant is located.

However, the same Suzuki interviewees had a different opinion regarding their experience in subsequent assignments to Maruti in the next seven years. The willingness of the workers to put in all-out effort to contribute to a good quality product that they had found in abundance during their first assignment, was lacking. An interesting comment by one such Suzuki adviser was: "Had I not known what the situation had been ten years ago, I would have thought that what I was seeing during my second and third visit was the real thing."[22]

At the start-up stage, the situation had been very different, where the workers lacked knowledge and experience regarding car manufacture. In the later years they had become experienced at their jobs and had reached a stage where they not only had the necessary process experience, but also the technological skill and knowledge related to the processes. Further, many new employees who had joined the firm in subsequent years had mastered their jobs without the aid of the Japanese advisers and were not very willing to heed their advice when the occasion arose later on. Whatever they had learned had been transmitted to them by way of the Indian supervisors or senior workers. The senior workers who had in the initial phase worked with the Japanese advisers remembered what had been taught to them and performed as was expected of them; but this was not so in the case of the newcomers. As a result, according to some of the Japanese persons interviewed, the manner of working had settled into what could be best described as 'Maruti style'.

The Japanese interviewees further commented that some of the workers tend to short-cut a job.[23] One such example was in the assembly shop, where numerous components are fixed on to the painted car body as it moves on the conveyor. The jobs are strictly defined, and each worker carries out a sequence of steps to affix the component he is in charge of, within the required time limit. It is ultimately the worker who controls his own performance. What thus plays a major role here is the moral consciousness of the worker, his sense of responsibility towards what he is doing. Knowledge and skill related to his work are no doubt significant for the newcomer; but defects arising from a lack of knowledge are something that are easier to handle, since such a worker can then be taught the right method. Taking up the example of torquing a component, certain steps have to be strictly followed in a sequence to ensure that the torquing is complete. It is quite possible that the monotonous and routine nature of the work causes the worker to be inattentive, and do an incorrect torquing. This can result in a major defect later on. For example, if it happens that a worker fails to do proper torquing of a critical component, i.e. an (A) (*maru* A) component, then in the worst cases a car accident

caused by an (A) defect can result in the loss of life of the driver or the passengers. Toyoda Kiichiro talked about problems like these in one of his valuable memoirs, when he was struggling to establish an automobile industry in Japan in 1936.[24]

Four Maruti workers interviewed voiced similar views about the lax attitude that has become prevalent in recent years, which had not been there earlier. For example, prompt action used to be taken whenever there were defective components in the assembly line. But with the production volume constantly on the rise, the number of defective components, too, has increased. As the frequency of defects became more difficult to control, the attitude of the superiors towards defective components gradually changed. As far as a worker's duties go, it is not for him to worry about the quality of the components that he is using. A sincere worker would lose his motivation upon repeatedly encountering defective components, which are not only an irritant but a positive deterrent to maintaining his regular work pace. Providing an environment where he can work smoothly with good quality components is the duty of the management.

Another reason suggested by the Suzuki members for the change in attitude is the role played by the Indian supervisors. In Maruti, a person with the requisite university qualification enters the company and is assigned to the post of a supervisor directly without any hands-on experience on the production line. This means that, even though he has acquired the necessary theoretical background from university education, he does not necessarily know what the actual situation is on the line. The Japanese advisers thus feel that the Indian supervisors should be more acquainted with the production line itself before they start giving instructions to the workers. They struggled to impress upon the Indian side the important role played by a supervisor. A Japanese supervisor is someone with hands-on experience and very much a part of the team. One who is supposed to say "lets solve the problem together", instead of "you do it". This sort of attitude was much appreciated by the rank-and-file Maruti workers. One of the workers on training to Suzuki remarked:

> "Here in Suzuki the supervisors work as much as the technicians and I cannot help but admire that. At times they take up more workload than the technicians, and do not feel ashamed of it. Our supervisors at Maruti are always handing out duties and that sort of attitude isn't very encouraging. It is quite like what happens in a family. If I insist that my children should keep the house clean and tidy, I cannot expect them to follow my request if I myself do not set an example."

It is not uncommon for a Maruti worker with ten years of line experience to have a higher level of knowledge of the line than a new supervisor. In such a case the senior worker may tend to disregard instructions given by the inexperienced supervisor. The latter may feel slighted and this may deteriorate his relations within his group. In the worst case his pride may be hurt and he may try to single out the worker. Matters would complicate further if the Union gets involved.

## Concluding Remarks

As has been clearly illustrated above, the main role players in transferring the organizational practices were the Japanese advisers from Suzuki. Needless to say, there were

numerous difficulties initially, mainly in the form of resistance, but the persistent efforts of the Maruti top management along with the Suzuki advisers made it possible to overcome most of the difficulties. Interestingly though, at times it was the friction that occurred that helped formed a bond between the Japanese and the Indian workers.

The following are some of the reasons that can explain why some of the Japanese work practices could eventually be transferred:

- The manner of training was very systematic where the Japanese advisers and the supervisors and engineers who had already received prior training in Japan taught the workers by actually doing the work themselves, then making the workers perform the job while they watched and corrected the mistakes then and there.
- The number of workers was smaller and therefore a more manageable group for detailed instructions. The production volume was also small, so there was scope for intensive man-to-man transferring of skills.
- As a policy Maruti deliberately hired people inexperienced in automobile manufacturing so that they would be able to imbibe the new work practices easily.

Yet there were still some areas where it was not possible to copy the Japanese system in toto, for example the vertical relationship that exists between the supervisors and the workers, giving prior notice before taking leave, concern with the previous and the next process. The Maruti workers who received training in Suzuki observed marked differences in the style of working of Japanese supervisors and expressed the desire for a similar environment in their own company too.

The Suzuki advisers who had the experience of witnessing the activities of Maruti during the first phase, and advisory experience in subsequent phases had unanimous opinions regarding the following. That the 'motivation' or the zeal that was so obvious during the first phase was lacking during the later years. The earlier work practices taught to a handful of workers had been diluted with the increase in the work force and production volume. This has resulted in less intensive training as well as the gradual loss of the esprit de corps present in the initial stages. As a means to remedy this Maruti has now incorporated a method of six months training of workers at Suzuki. Under this program batches of about 50 workers work in Suzuki on the lines with the Japanese workers twice a year.

The discussion in this paper has focussed on what has been transferred, what has been adopted and what changes occurred through the years and why. Does cultural context play a role? Obviously there are some repercussions. But this role does not necessarily act as a deterrent to the transfer of organizational practices from Japan. Rational practices should have no cultural boundaries.

We started out by discussing the initial problems faced during the transfer of the Japanese work practices and operational skills. It was a clear indication that the coming together of two different systems is associated with conflicts as each side tries to come to an understanding of the other's systems. The situation is further complicated when the players are people from different socio-cultural backgrounds.

However, in the Maruti-Suzuki case, we see that a pattern emerges through the whole process of introduction and acceptance of the Japanese work practices which can be categorized into the following: a) introduction, b) initial resistance, c) persistent teaching, d) acceptance, e) adaptation, f) assimilation.

One of the shortcomings relates directly to the role of the supervisors, as we have already seen. One of the necessary requisites of a supervisor is that he should know his job well and be willing to shoulder responsibility. He should be able to boost the morale of the workers and should, in spite of his superior position, be sympathetic to their problems and not just be the middle-man who is carrying out the manager's orders. Such qualifications seem difficult to meet by one man, but then the job of a supervisor is not easy in any way. Yet, it is quite understandable that in the initial stage, it would have been impossible for Maruti as a new company to immediately implement the Japanese system of promoting supervisors from among the workers after several years of shop floor experience. Some changes regarding the selection of supervisors have already taken place as the following reply to a questionnaire from Maruti shows:[25]

> "Technicians with good performance records who have supervision capabilities are selected as assistant supervisors. Such assistant supervisors are promoted to supervisors after 6-7 years of service. All future requirements of Maruti will be met by assistant supervisors promoted from amongst the workmen."

An important finding was that some of the typically Japanese practices lost their impact as time passed. One reason for this can be attributed to the fact that most of these practices arise out of a strong group consciousness or *nakama ishiki* which is an intrinsic quality of the Japanese people. A Japanese worker thus identifies very strongly with his group and is willing to make the necessary sacrifices to forge good relations with the group, and through this to his company. There is also a strong sense of hierarchy which is the reason why the supervisor is able to have such an immense influence on his group of workers. No doubt the fact that the supervisor is one who has risen from the level of the rank and file worker is an important consideration that should not be ignored. Here one can argue that some of the attributes of Japanese work practices like the positive attitude and pride towards one's work, sense of responsibility and the desire to strive hard to excel in whatever one's job may be are universal characteristics and not necessarily Japanese in nature. What cannot be denied is that the Japan of the 1950s through the 70s as a nation, and collectively, emphasized these very qualities which formed the basis of its success. Cultural homogenity helped to a great extent, so did common values and a strong sense of motivation. What we saw in the initial stage of Maruti was an attempt to internalize these qualities which subsequently got diluted. The moot question is that can these be reintroduced? I think that they can very well be. Indians are known for their individualism and the desire to compete. It is however true that they function better as individuals rather than a team. Efforts should be made to pick up the best of the Japanese work practices and combine them with the values that are already present in the Indian society.

*From industrial to human relations*

The deeper I analysed the issue of transfer of Japanese organizational practices the stronger was the impression that the crucial point is not what kind of practices are introduced that influence the manner of working of the worker. What is crucial to the worker, is to what extent he is treated as an individual on the shop floor. As far as the nature of the shop floor is concerned the job itself gradually fosters discontent. It is here that the management must begin to come up with creative ideas as to what can be done to motivate workers and treat

them from the standpoint of human relations rather than purely industrial relations.

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2 Gelsantliter, D. (1990): *Jump Start–Japan Comes to the Heartland.* Toronto. Harper and Collins; Wickens, P. (1987): *The Road to Nissan: Flexibility, Quality, Teamwork.* Macmillan Press.

3 Suzuki, Naohito (1984): "Japanese Style Management and Its Transferability: From the Perspective of a Foreign Firm", *Japanese Economic Studies,* Vol.12, pp.64-79; Also see Kaplinsky, R. and A. Posthuma (1994): *Easternization: The Spread of Japanese Management Techniques to Developing Countries.* Frank Cass.

4 'Austin Rover' Speech given by Mark Snowdon, MD (Product Development) of Austin Rover, to the International Association for Vehicle Design in Geneva, March 3, 1986.

5 What had first surprised me when I worked at Maruti was the fact that the Japanese joint managing director was sharing the same table with the interpreters who were directly associated with his department. However I could notice that there was a distinct difference in the attitudes of the employees surrounding him—respectful and yet informal.

6 In some ways this is more faithfully followed at Maruti than at SMC. During my field study at SMC, I noticed that there were many Japanese employees at the Head Office who were not in their full uniform. Some wore a formal suit instead of a uniform.

7 Johnson, R. and G.W. Ouchi. (1974): "Made in America (Under Japanese Management)," *Harvard Business Review*: 35-43.

8 Hamaguchi, T. (1985): "Prospects for Self-Reliance and Indigenization in Automobile Industry: Case of Maruti-Suzuki Project," *Economic and Political Weekly,* Vol. XX:118-122.

9 AOTS (Association for Overseas Technical Scholarship): a non-profit organization established in 1959 with support from the Japanese Ministry of International Trade and Industries (MITI). Its main purpose is to invite trainees from developing countries and provide technical and managerial training services on a private basis in Japan to promote technical cooperation and enhance mutual understanding between those countries and Japan. Until now AOTS has trained about 64,000 people in Japan from over 150 countries and regions, of whom 2,357 have been from India itself. Koike, K. and Inoki, T. (1990): *Skill Formation in Japan and Southeast Asia:*. University of Tokyo Press.

10 Emphasis on a clean shop floor is one of the typical features of Japanese work practices. A similar case can be found in the case of the Sanyo Manufacturing Corporation at Arkansas: "One of the new management's first actions was to clear out the plant over a weekend, clean it and polyurethane the floors. Not only did this make the whole plant look cleaner and brighter, but it also reduced the dust in the air which sometimes caused equipment to gum up or interfered with the connections of electronic parts. Also, when a floor is clean like that anything that falls on it is visible, so you automatically pick it up. It seems like a silly thing, but it made a noticeable improvement in morale," remembered one man. Harvard Business School Case Studies, *"Sanyo Manufacturing Corporation–Forrest City, Arkansas", 9-682-045 Rev.8/86.*

11 I had a chance to visit some large production plants in Japan. In each of them I was impressed to see that the shop floor, the machines, the workers' uniforms, etc., were very clean. There were no components or other things littered on the floor. The Komatsu plant in Osaka, where they make large SPMs (Special Purpose Machines) and other engineering equipment, thereby necessiating the use of large quantities of grease, also had an amazingly clean and dry shop floor.

12 Kamata, S. (1982): *Japan in the Passing Lane : An Insider's Account of Life in a Japanese Auto Factory.* Pantheon Books. 3Ks, explained in the early part of the paper came to have a different significance in present-day corporate Japan. Young Japanese workers shun the jobs which characterize work on the production line, describing them as *Kitanai, Kitsui and Kurushii.* Also see Shimizu, Koichi, (1994): Humanisation du systÏame de production et du travail chez Toyota Motor Co. et Toyota Motor Kyushu, Lyon : Maison RhÏne-Alpes des Sciences de l'Homme, 27 p (Humanization of the Production System and Work at Toyota Motor Co. and Toyota Motor Kyushu, Translated by Sybil H. Mair)

13 "Why the Road Less Traveled Suits Suzuki" , *Business Week,* 1992, p. 19.

14 Nichiin Chosa Iinkai, Nihon Iinkai, 'Nichiin Minkan Kigyoukanno Gijutsuitenmo Mondaiten to Tenbou,' 1986. Nichiin Chosa Iinkai, Nihon Iinkai, 'Monono Kangaekata no Chigai–Shokibo na Case Study,' 4/10/91.

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17 Koike, K. (1994): "Learning and Incentive Systems in Japanese Industry", in Masahiko Aoki and Ronald Dore (ed.), *The Japanese Firm: The Sources of Competitive Strength.* Oxford University Press.

18 Transcription of interview carried out in October, 1991 at SMC Hamamatsu with the Maruti workers on training there.

19 In a working paper on the skill formation by Mitsuo Ishida (Doshisha University), on Japanese automobile companies, there is a slightly differing opinion. He reports that there is minimal direct involvement of the workers in equipment maintenance and repair.

20 All these interviews were carried out in private with the workers in a very informal atmosphere and not in the presence of any senior person. They were aware that I was recording the interview, and yet were willing to talk freely and at length.

21 Srinivasan, A.V. (1990): *Japanese Management–The Indian Context.* Tata McGraw-Hill, 13pp.

22 Transcription of interview with a Suzuki adviser who had been on deputation to Maruti thrice within a span of ten years.

23 For an interesting account of how assembly line workers in an American auto plant feel about their work, see Runcie, J. (1980): "By days I make the cars", *Harvard Business Review,* Vol 58: 106-115.

24 Toyoda, Kiichiro (1940): "Kokusan jidosha ha kanzen na monoga dekiru no ka?" Toyoda Jidosha Kabushiki Kaisha.

25 Reply to questionnaire from the MUL Personnel and Administration Department, October 1994.

## 日本の経営・作業方式の移転－スズキ社からインドマルティ社へ

シワニ・ナンディ

**要旨**：最近、日本の経営方式・作業方式は国内だけではなく、外国からも評判の的となりつつあります。本論文は、一つの特定の事例研究に基づき、日本からの経営方式及び作業方式の海外企業への転移の過程、そしてその定着を分析した結果です。82年には、インド政府は、日本のスズキ自動車株式会社をマルティ株式会社の技術相手として選び、日本の先進技術及びそれを運営する経営システムも導入し、停滞していたインドの自動車業界に於いてある種の「小規模の革命」を起こした。この論文は、日本からインドという異なった社会へ、マルティプロジェクトの初期段階のとき日本式システムの導入のシナリオとそれに伴う混乱、さらに時間の経過と共に現れてきた変化を描写していきます。
この研究は私自身の以前の会社での経験（90年～92年）を生かした上、両社の従業員と微にいり細にわたる面談に基づいたものです。