INTERVIEW

DR. W. EDWARDS DEMING

The Transformation of American Management

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How do you work with CEOs?
When I consult with chief executives, they report to me. I'll put in enough time to do the job and stay as long as I feel I'm accomplishing something. It usually takes about three years to transform the management style of an organization.

To qualify as a client, the top management must understand that they're in trouble and that they have to work out of it. The commitment to change must come from top management — no substitutes, no delegation. Continued training is dependent upon their performance. I won't stay if I don't see results. I have no time to waste. Many companies want me; I'm booked up for a long time.

What is your objective?
To bring about a transformation, to get the top executives to change. Instead of working on a quarterly dividend, they should plan to stay in business, provide jobs, produce products and services that have markets. I emphasize quality, and I show them how to get it. It's a long-term perspective, and yet a lot must happen in the first two years. Walk around with me and see what's happening. Most American companies are not doing the job. Japanese products are better and lower in price.

How do you define quality?
Quality means different things to different people. To a worker, it means pride in his work; to a manager it means consistency; to a customer, it means satisfaction; to an engineer, it means design; to a purchaser, it means zero defects.

Many forces in a corporate system determine the quality of the product or service. In 94 percent of the cases, when a product is defective, it's not the workers who are responsible. It's the imperfect system in which they are forced to operate.

What is your basic message to American management?
Executives will have to change their focus from dollars to people. I reject the argument that American management must have been doing something right to have enjoyed great prosperity from 1950 to 1970. I see no correlation at all. They may well have been doing everything wrong. The fact is that in 1950 American products had the market the world over. When the market began to slide out from under them, they lost market shares; and lost market begets unemployment. Finally, some American managers — maybe two or three percent of them — are beginning to see what's happened.

What is the situation with American business now?
We're experiencing another Pearl Harbor, only no bombs are being dropped. We're in the middle of a crisis, and few executives know anything about it. They eat well from day to day, and so they figure nothing very serious can be wrong.

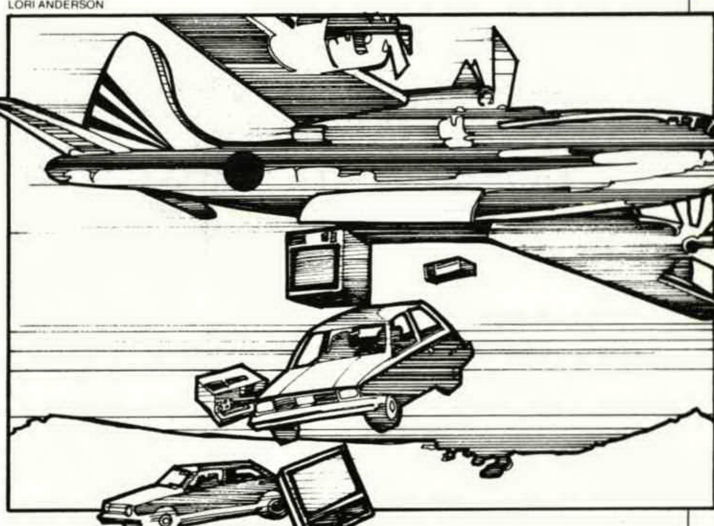
What is the solution?
The first step is get the top executives to recognize that they don't know their job . . . they must learn what the new job is. That's hard because people at the top feel like they have to defend their position. It's hard for them to admit that they have something new to learn. It seems all they understand are dollars. They're afraid to improve quality for fear it will cost too much; of course, they are blind to total costs. Besides, most executives have no idea how to improve the quality of their product or service.

How did you help Japanese executives to improve the quality of their products and services?
In 1950, we began a process of change. I first taught them the principles. All the top management got together to learn something of their responsibility. I taught them that improving quality is not merely finding and solving problems with the product. You can't inspect quality into a product; you have to build it into a product. And when you improve quality, you automatically improve productivity. You start a chain reaction. With improved quality, you get greater productivity, less rework, less variation, more dependability, less cost, greater market share, more jobs. It's that simple.

Is there anything inherent in Japanese culture that accounts for their success?
Nonsense. The only difference is that here management counts money, dollars and dividends, and tries to keep from being taken over or leveraged out. Sure, we must keep the bank account in good order. But anybody can pay dividends in the short-term by cutting research, maintenance, a lot of things. But that's no sign of good management. What about the ability to stay in business and prepare for the future? In Japan, the emphasis is on people. They take a long-term view of dividends. I think we can see which system works better.

Are you optimistic that we can experience a transformation here in America?
Sure. A lot of top executives are listening and learning. We begin the process at the top.

LORI ANDERSON



JUNICHI KAMIYAMA

IN JAPAN

Quality Means Reducing 'Baratsuki'

Variation is the enemy of quality. To reduce variation in products, increase the level of technology. To reduce variation in people, increase the level of training. High technology and strong character are the best assurances of quality.

IN 1974, THE management of Tohoku Ricoh, a key production division of the Ricoh Corporation, was put in a difficult position. Ricoh executives decided to terminate production of electronic calculators because the company was far behind competitors in development and because current inspection procedures could not ensure quality.

To make matters worse, products duly inspected and put on the market were unfavorably received. Consumer complaints resulted in heavy losses.

Once an enterprise fails to make quality goods, it runs into the red, and in the worst case is brought to ruin. But in the Ricoh case, this year was a turning point. We initiated total quality control and just one year later, in December 1975, we were awarded the much coveted Deming Prize.

Company quality consciousness continued to show remarkable progress during the next three years. We achieved good results by using statistical methods for controlling production processes. Despite these improvements, we worried about the discord between manufacturing and quality control. People felt that production and quality control were two separate entities; their views were not harmonized.

We then determined to reexamine our quality control concepts and practices. We selected and carefully observed all factors involved in certain manufacturing processes. Through this exercise, our president and top management came to understand quality control correctly, from experience, not from books.

We all learned that quality control must be based on facts. It is necessary to perceive variation or *Baratsuki* on the basis of facts and to make use of this information to improve quality.

IN THE TRUEST SENSE, THE QUALITY REFORMATION OF A CORPORATION BEGINS WITH BUILDING THE CHARACTER OF ITS PEOPLE.

I USE THE JAPANESE word *Baratsuki* to refer to differences or variations in output of repetitive processes. For example, in golf, the same person using the same club will not hit all balls to exactly the same spot. There will be some spread or variation in distance and direction. Quality control seeks to reduce the difference or *Baratsuki*. Just as *Baratsuki* in the golfer's swing results in variation in the position of the golf ball, *Baratsuki* in a repetitive production process results in variation in product quality.

The main purpose of quality control is to locate cases of *Baratsuki* and perform the necessary corrective actions. When *Baratsuki* exceeds control limits, two things must be done: 1) investigate causes and take immediate action to restore and maintain the desired condition (quality management); and 2) check the resultant *Baratsuki* and reduce it to avoid 100 percent inspection and correction (quality improvement).

By our definition, quality control involves no other tasks. Work done according to standards is "work operation." Quality Control is in practice when repetitive work is checked for variation, and both quality management and quality improvement are achieved.

SOMETIMES THE CAUSE of serious *Baratsuki* is unknown. In other cases, the major cause is known, but it is not clear what to do about it. In both cases, low technical level is usually responsible for the *Baratsuki*. To produce quality goods by manufacturing processes alone, the technical level must be high. If technical level is sufficiently high, we can eliminate virtually all inspection and correction work.

When the technical capability is low and defective products are found in all lots, 100 percent inspection must be made on all lots. When technical capability is improved and defective products are found in some lots, sampling inspection is sufficient, although extra labor is required for sorting and correction. And when technical capability is further improved and no defective articles are found in any lots, inspections are no longer required. Reaching the non-inspection level doesn't eliminate the need for quality management, however.

LORI ANDERSON

OUR ULTIMATE objective is to achieve quality through pre-production preparation and proper processing and assembly. This can be called "quality assurance through process," and it requires the highest technical capability.

We learned that there are three types of *Baratsuki* and each requires a different type of quality control. There may be variation in products, jobs, or people. Of the three, human quality control is most difficult. *Baratsuki* in people is everywhere, but not every manager can see it. Only those who have sensitivity can detect small differences in people that make big differences in the quality of products.

We have tried to cultivate the sensitivity of managers to help them perceive and make use of *Baratsuki* to improve quality. I find, too, that I am becoming a more sensitive person, more sensitive to the differences that make a difference. And I have concluded that in the truest sense, the quality reformation of a corporation begins with building the character of its people. □

Condensed from his address at the Ninth Annual Productivity Seminar, Utah State University, April 1984.

My 14 points and deadly diseases constitute a system. It's not charging here and there, just "doing our best." It's following a prescribed system. Many companies are doing it. I'm encouraged by my work with American automobile manufacturers. They're going to work and working together. They're finding that unless they work together, people in different areas of the company will maximize profits for their own promotion at the expense of the company as a whole. We must work in teams, together.

You're convinced that American management can change?

You can't tell me that Americans can't change or that Americans can't work together. They can. Whether they will or not is another question.

This country is the most underdeveloped nation in the world. That's something to be proud of. We did it again. We're number one. I say that because of the vast number of unemployed and underemployed, underused and abused people, both in management and labor. But all we need for a transformation is good people and good management. We have the people. And where will we get good management? Probably not from our schools of management. That's where we learn all the wrong things. We learn "management by figures" and "management by objectives" and other nonsense. Executives have many figures, many numbers. But they lack essential information. They have numbers on everything but what's important, because they never learn what's important. We breed obsolescence in schools of management.

So where do you get the excellent management we need?

The management we need must be created. Let's get back to the 14 points and the removal of deadly diseases. Let's eliminate fear. That's a big part of the problem. People are afraid to do what they're capable of. Let's work together, help each other, even our competitors. Nobody can survive alone. Let's meet in groups and get our ideas criticized. Let's not be "sold down river" for ideas and slogans that sound great but don't work. And, finally, let's give people a chance to take pride in their work. Few people in the factory have that privilege anymore, and in the ranks of management, the situation is even worse. □

DEMING'S 14 POINTS

1. Create a constancy of purpose for improving products and services. "Forget the next quarterly dividend and plan to stay in business through innovation, research, maintenance, and constant improvement."

2. Adopt a new philosophy for the new economic age. "We have learned to live with mistakes and defective products. It's time to adopt a new philosophy. Acceptance of defective materials, poor workmanship, and inattentive service is a roadblock to better quality and productivity."

3. Cease dependence on inspection for improvements in quality. "Instead, get statistical evidence that quality is being built into the product from the beginning, thus eliminating the need for mass inspection."

4. End the practice of awarding business on the basis of price alone. "Instead, depend on meaningful measures of quality and eliminate suppliers that cannot support their claims with statistical evidence."

5. Constantly improve the system of production and service. "Continually reduce waste and other problems. This is the job of management."

6. Institute effective training on the job. "No training or poor training and dependence on printed instructions have become a way of life."

7. Institute methods of supervision that help people, machines, and gadgets to do a better job. "Shift the emphasis from numbers to quality. Improvement in quality will automatically improve productivity."

8. Drive out fear. "The economic loss from fear is appalling. People must feel secure to improve quality and productivity. Fear keeps people from asking questions, taking positions, and understanding their jobs."

9. Break down barriers between departments. "People in research, design, sales, and production must work as a team to prevent problems."

10. Eliminate slogans, exhortations, pictures, and posters for the work force. "They never helped anybody do a better job."

11. Eliminate numerical quotas. "Usually they only guarantee inefficiency, high costs, and poor quality."

12. Remove barriers that stand between people and their right to pride of workmanship. "These barriers may include misguided supervisors, faulty equipment, defective material."

13. Institute a vigorous program of continuing education and retraining. "Management has a new job, and so does everybody else."

14. Create a structure and system in top management that will push every day on each of the above 13 points.

DEMING'S SEVEN DEADLY DISEASES

1. No constancy of purpose for improving the quality of the product or service. "Without constant improvement, your products will have no market. If your product or service has no market, your company will go out of business."

2. Emphasis on short-term profits. "Short-term thinking, the opposite of constancy of purpose, is fed by the fear of takeover and the demands for quarterly dividends. What an injustice to the stockholder. If I had to live on dividends, I would be much more interested, not in the current figure, but whether there will be dividends one, three, or five years from now."

3. Annual performance reviews. "The effects are devastating. Most performance review systems wreck teamwork and nurture rivalry, substitute long-term planning for short-term performance, build fear and leave people bitter or falsely secure."

4. Barriers that rob workers of pride of workmanship. "Defective materials, obsolete machinery, unclear instructions, quota management, management by exhortation and slogans, lack of training, lack of teamwork are some of those barriers."

5. Failure to adopt a policy of continuous improvement. "We mistakingly suppose that once the quality is 'good enough,' any further improvement will not create enough new business to warrant the effort and expense. But the Japanese keep right on improving their processes by involving people who know the process, even if they don't have a college degree."

6. Hope for quick results or "instant pudding." "Transformations take time. Just look at the obstacles that must be removed. But some positive results can be obtained in two or three years, more in five or six years. Anyone who talks of a turnaround 'right around the corner' is either irresponsible or ignorant or both."

7. Management mobility. "A lot of the mobility could be halted by removing fear and management by figures. The art of management is more than running a company on figures and fear."

CHARLES A. GARFIELD

THE MENTOR

Training the Peak Performance Manager

To maintain balance and keep perspective, a manager must learn to listen to two advisors — the motivator and the troubleshooter. He may then progress from laborer to craftsman, to artist and mentor, working not only with hand and head but also with heart and soul.

I MET RECENTLY with William Namol, the number one salesman of a large American insurance company. He contacted me after reading my recent book, *Peak Performance: Mental Training Techniques of the World's Greatest Athletes.*

Namol told me that as an ambitious young man, he was baffled by the enormous differences in yearly sales between the top performers and those who were average. He asked his sales manager, Abe Miller, called "coach" because of his talent for getting the best from his sales staff, to help him understand the secrets of peak performance. The conversation went something like this:

Namol: Why do some people excel and others excuse themselves?

Coach: All salesmen are like blind men who rely on two advisors: one offers advice that is bold and exciting; however, he only appears one day each year. The other is more cautious, occasionally pessimistic, but he is persuasive, especially since he's present for 364 days each year. Each salesman has his two advisors, and his assessment of his potential for peak performance is based on his estimate of the relative value of their advice.

Namol: Which advisor should I follow?

Coach: Which do you think?

Namol: I guess the first, the motivator. He will pump me up and prepare me to conquer the world.

Coach: But then what might happen?

Namol: I will probably stay motivated for a while, but I know that in a world filled with rejection, competition, interruptions, and complications, I may run out of gas and get discouraged.

Coach: And now you sound like the second advisor: "It's a jungle out there; it's hopeless."

Namol: Their advice conflicts, and yet both advisors can be correct. Which should I listen to?

Coach: Both of them.

Namol: I don't understand.

Coach: It's simple. People who listen only to the first advisor become motivated and get a glimpse of the upper limits of their potential, but they never reach those upper limits; instead, they reach a comfort zone, a plateau.

Namol: Why is that?

Coach: Because they don't heed the second advisor. They never learn how to thrive in the jungle. In the hardest times, peak performers learn the most important lessons. They develop ways of expanding their comfort zones and removing the impediments to high performance.

Namol: How? Through self-improvement and professional development?

Coach: Exactly. People who don't develop often die on the job. In a rapidly changing world, one can't remain still without falling behind. Experience may not be the best teacher. Yesterday's lessons may not suit tomorrow's challenges. Individuals and industries must innovate and adapt, not merely complain about how tough it is in the jungle, or they may die.

Namol: So, peak performers set their sights high — beyond their present best — and believe in their ability to make major increases over previous levels of performance and productivity?

Coach: Yes, and they benefit from the wisdom of the second advisor. They know things can and will get rough. But they learn to be more effective and efficient, more comfortable with risk and feedback, and better able to revise plans and correct course.

Namol: Okay. I must believe in myself and learn from both advisors to avoid getting stuck in a comfort zone or buried alive on the job.

Coach: Yes, and there's one more thing.

Namol: What's that, coach?

Coach: Keep the two advisors — the motivator and the troubleshooter — by your side and listen to them frequently throughout your career. Through the power of personal initiative, you can change things for the better. Peak performers achieve in spite of their human faults by making commitments and acting out of their positive beliefs and feelings. They know that never to attempt peak performance is to court hopelessness. They also know that to be pessimistic about their potential or suspicious of others who try for excellence is to prevent themselves and others from achieving their goals. Despair is often common, even fashionable in some circles, and it's easy to dismiss or ridicule the challenge of excellence. After all, nothing is more difficult or more painful than to look clearly at your own wasted potential and then start doing something about it.

"WHEN YOU LEARN TO TRUST YOUR OWN FEELINGS AS WELL AS BENEFIT FROM THE MENTORING OF YOUR TWO ADVISORS, YOU WILL HAVE ALL YOU NEED TO PERFORM AT YOUR PEAK LEVEL."

Namol: Thanks, coach. I'm lucky to have this chance to pick your brain.

Coach: Luck has nothing to do with it. Peak performers get more "lucky" breaks because they prepare for them. The choice to prepare exists at every point in time for all of us.

Namol: Do you think I'm a peak performer?

Coach: Not yet, but soon. Right now you're collecting data, information on how to attain extraordinary results, how to transform your intentions into reality. You certainly have the potential, but the history of business is loaded with the bleached bones of people who never realize their potential. Those who make it to the highest level know that peak performers are trained,

Seven Deadly Diseases

1. Lack of constancy of purpose.
2. Emphasis on short-term profits.
3. Evaluation of performance, merit rating and annual review.
4. Mobility of management.
5. Running a company on visible figures alone.
6. Excessive medical costs.
7. Excessive costs of liability.