

Notes and quotes from W. Edwards Deming's Book

## OUT OF CRISIS

(Compiled by D. H. Groberg)

### SUMMARY

Deming states that the purpose of this book is the "transformation of the style of American management." He says that this task is not one of reconstruction or revision, but rather "requires a whole new structure, from the foundation upward." He says that it must be a long term commitment and is the only way to "halt the decline and give American Industry a chance to lead the world again."

He says that the goal should be to improve overall productivity, and the key to this is understanding the nature of variation and having operational definitions. Everyone doing his best is not the answer. They must change what they are doing, and the first step is to learn how to change. He lists 14 points which he calls Principles of Transformation, along with a list of Diseases and Obstacles to change.

Most of the book focuses on statistics as a means of improving quality, but Deming also touches upon subjects such as New Principles of Training and Leadership, Standards, and Illustrations for Improvement of Living.

### **CHAPTER 1: Chain Reaction: Quality, Productivity, Lower Costs, Capture the Market**

Quality and production are not incompatible. Productivity increases as quality improves, because there is less rework and not so much waste. Defects that get into the hands of customers lose the market and cost workers their jobs. With enough people and good management, any country can be rich. [Also any company?] In terms of underuse, misuse, and abuse of knowledge and skills, the U.S. might qualify as the most underdeveloped country in the world.

Most gains in productivity must come from improving the system, improvements to help people work smarter, not harder. Low quality means high cost because someone gets paid for both making and correcting defects. Trusting hopefully in hardware (new gadgets) will be disappointing, and is not a substitute for improved management, which leads to improved systems.

## **CHAPTER 2: Principles for Transformation of Western Management**

Best efforts are not sufficient. "Think of the chaos that would come if everyone did his best, not knowing what to do?" Managers should ask questions such as:

1. Where do you hope to be five years from now?  
and
2. How will you reach this goal? By what method?

"Hopes without a method to achieve them will remain mere hopes." But the most important figures needed for management of any organization are unknown and unknowable. Short term profits can come by deferring maintenance, cutting research, etc. Long term profits come by improving quality and productivity (they go hand in hand). Top management must be both committed to quality and know what to do to get it. Quality does not come by motivating people to work faster or harder. It comes by following these 14 points:

1. Create constancy of purpose toward improvement of product and service.
2. Adopt the new philosophy (Take on leadership for change).
3. Cease dependence on inspection to achieve quality. (Build quality into the product in the first place).
4. Don't award business based on price; minimize total cost by having single suppliers on long-term relationships of loyalty and trust.
5. Constantly improve the system of production and service (forever).
6. Institute training on the job.
7. Institute leadership. (The aim of supervision should be to help people, machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.)

8. Drive out fear (so that everyone may work effectively for the company).
9. Break down barriers between departments.
10. Eliminate slogans, exhortations, even target goals etc. aimed at the work force (because the bulk of the causes of problems belong to the system and are beyond the power of the workforce per se).
11. Eliminate work standards (quotas) and Management by Objectives. **SUBSTITUTE LEADERSHIP.** (If you have a stable system, there is no need to specify a goal: you will get what the system produces.)
12. Remove barriers that rob the employees/managers of pride of workmanship.
13. Institute a vigorous program of education and self-improvement.
14. Put everyone in the organization to work to accomplish the transformation.

### **CHAPTER 3: Diseases and Obstacles**

Deadly diseases stand in the way of transformation of management. The diseases are:

1. Lack of constancy of purpose (to plan product and service that will have a market and keep the company in business and provide jobs.)
2. Emphasis on short-term profits. "Most American executives think they are in the business to make money, rather than products and service..." Profits follow good products.
3. Evaluation of performance, merit rating, or annual review. (Management by fear.) The effect is exactly the opposite of what it promises. Problems: It nourishes short-term performance, stops long-term planning, builds fear, destroys teamwork, nourishes rivalry and politics. Deming says: