

**Ongoing Discussion “Thought Piece”**

*W. Edwards Deming – What I Heard*

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February 26-27, 2015

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for

Aerojet Rocketdyne’s  
InThinking Network

I will admit upfront that I am a “Deming Disciple.” The In2:InThinking Network leadership presents a much broader umbrella of leadership and management theory. Taguchi's Quality Loss Function, Edward de Bono's Six Thinking Hats, and probably most importantly, Russ Ackoff's information about Systems Thinking, are deeply ingrained in the In2:InThinking Network's message. I have no argument with the broad knowledge that these different theories and messages contain and applaud the InThinking efforts within Aerojet Rocketdyne as well as members of the In2:InThinking Network for their great desire to continue to learn.

For me, since my first meeting with Dr. Deming back in 1983, I have followed and taught Dr. Deming's Theory of Management as best I could. The title of this thought piece, “What I Heard” is derived from conversations that some of my friends had with Dr. Deming over the years. I think it was Gipsie Ranney who asked Dr. Deming what he thought people heard of what he presented. His reply was "I know what I said. I don't know what they heard." My friend Bill Cooper asked Dr. Deming a similar question phrased something like, "Of all the people you meet through your seminars every year, how many do you think walk away having heard what you presented?" “Very few,” was Dr. Deming's response. One night during a roundtable interaction with Dr. Deming, Bill Cooper told Dr. Deming, “You said we need a statistician.” “I didn't say any such thing,” was Dr. Deming's immediate reply. Again, there was a gap between what Bill thought he heard, and what Dr. Deming believes he said.

I knew Dr. Deming the last ten years of his life. I attended five of his Four-Day Seminars. I worked to apply his teachings in my organizations, and after my retirement from serving 30 years in the Navy, I assisted clients who were looking for quality improvement. I found Dr. Deming's teachings, as I understood them, powerful in providing both the Theory and Tools for leaders to work in their organizations to improve everything that they did.

During the last part of his life, Dr. Deming developed a framework for his thoughts that he called, Profound Knowledge. It focuses attention on:

- Appreciation for a System
- Knowledge about Variation
- Theory of Knowledge
- Psychology of People

While they are listed individually, according to Dr. Deming they are all related to each other.

I think that Dr. Deming's message has been modified and diminished of late. Most talks I hear and articles I read focus on Systems Theory and Psychology. They shy away from the Theory of Variation with a quick comment like, "You don't have to understand the math to improve quality." Likewise, Deming's Theory of Knowledge is a little tougher as he links knowledge to theory and prediction. In my view, one of the key requirements for prediction is a proper understanding of data, data collection, portrayal, and yes, Knowledge of Variation.

For me, *Knowledge of Variation* is central to a full understanding of Dr. Deming's teachings. It took me awhile to come to this conclusion but one evening in Long Beach, as seven of us were sitting in Dr. Deming's hotel room I had the opportunity to ask him about it. Usually, when he is in such a venue with friends, we simply tell jokes and share experiences. We knew he had had a long day conducting his seminar so kept our conversations light. "No business," was the unwritten rule. There was a lull in the conversation and I asked Dr. Deming if I could ask him a question that had been on my mind. "Go ahead," he replied. I started. "Dr. Deming, it seems to me that the cornerstone of your theory, your teachings, is your deep understanding of the Theory of Variation. Is that true?" I tried to speak with a slightly raised voice and slow because I knew Dr. Deming was hard of hearing. He thought for a few seconds and then asked me to repeat the question. "It seems to me that the cornerstone of your theory, your teachings, is your deep understanding of the Theory of Variation." He thought for about ten seconds, looked up and said, "That sounds just about right to me." Since that night I have believed that people who do not understand the Theory of Variation will miss over 70 percent of the meaning of Dr. Deming's teachings. Understanding the Theory of Variation gives Dr. Deming's pronouncements power and the reason that they are true.

Take Dr. Deming's famous, "14 Points" which he sometimes called, "The 14 Obligations of Management". My question to the reader is, "How many of the 14 points are directly related to an understanding of the Theory of Variation? Here is an abbreviated list:

1. Create constancy of purpose
2. Adopt a new philosophy
3. Cease dependence on inspection to achieve quality
4. End the practice of awarding business on the basis of price tag.
5. Improve constantly and forever the system of production and service
6. Institute training on the job
7. Institute leadership
8. Drive out fear
9. Break down barriers between departments
10. Eliminate slogans, exhortations and targets for the work force
- 11a. Eliminate work standards (quotas) on the factory floor
- 11b. Eliminate Management by objective, abolish the annual rating system
12. Remove barriers that rob the hourly worker of pride of workmanship
13. Institute a vigorous program of education and self-improvement
14. Put everybody in the company to work on transformation

It is my belief that at least 10 of the 14 points have their genesis in Dr. Deming's understanding of the Theory of Variation. We will review and discuss this during the phone conversation.

I have a video tape where Dr. Deming says, "The problem went to Dr. Shewhart. He saw, not right away, nobody knows how hard he worked, he was a great student, continually working. He gave to the world two kinds of variation; variation from constant causes and variation from what he called assignable, what I call special. Two kinds of variation, a new thought." So I ask you, how many times recently have you been in a management meeting, looking at recent performance information, and when a point is pointed out as either above or below the last point plotted or listed somebody will ask, "Is that a Special Case or a result Common to the System? I hope you will tell me often, all the time. I have my doubts. For me that is a central theme of Dr. Deming's message to us. Without such knowledge, any action taken could well be what Dr. Deming called, "Tampering with the system." It is likely to make things worse.

If you haven't read it lately, I suggest you read, "Four Days With Dr. Deming" written by William Latzko and David Saunders. I don't think you can come away from that experience without a greater appreciation for and dedication to the Red Bead Experiment and the message it sends about the Theory of Variation.

The second important principle I heard from Dr. Deming involves the annual performance review, the rating and ranking of people. Dr. Deming was firm that this practice should be eliminated. Most people today, when discussing this pin the reason to eliminate personal reviews on the Psychology of People and say things like, "The annual review makes people feel bad!" or "Annual reviews break down teamwork, trust, and harmony." These feelings may well be true but in my view, they are a by-product of the annual review system. The reason this happens is that the annual review system is simple, "NOT FAIR".

To understand this, I will relate to you that Dr. Deming demonstrated an interesting progression in his thinking about the effect the system has on an organization's results. The first time I heard Dr. Deming, he stated that, "85% of what happens in an organization is the result of the systems used, not the people." The next time I heard him talk on the subject, he said that 90% of what happens is a result of the system. In the early 1990's the figure was again increased to 92%-95% attributed to the system. Finally, in an interview with Carla Lazzareschi, a writer for the Los Angeles Times (Business section 5 Dec. 1993) he is quoted as saying, " All that happens comes from the system, not the workers, it's absolutely frightening, . . . just frightening."

Dr. Deming's point was that the performance of anyone is largely determined by the "System" they work in. Certainly a worker is part of the system, but the great majority of the results of the organization are determined by the system, not the people.

My simple example to make this point is to compare two typists. Back before 1990, there were IBM Select-o-matic typewriters with correction ribbons. These were the top of the line for secretaries. Then came computer technology with the Word Processor. If two typists were using different typewriters, one Select-o-matic and one Word Processor, which typist will do more work with better accuracy? The type of machine has far more to do with the output than the technical ability of the typists. So the question is, how should the typists be graded during their annual performance review?

In 1984, when I first heard Dr. Deming discuss this subject, he wrote on his projector:  $X + Y = 8$ , where  $X$  is the contribution of the person and  $Y$  is the contribution of the system. Then he looked over his glasses and told the audience, "If you can solve this equation, you can rate people." Anyone with basic knowledge of algebra knew right away that Dr. Deming had written a single equation with two unknowns. It takes two equations to solve a problem with two unknowns. The next time I saw him on this same subject the equation had changed to:  $X + Y + XY = 8$ .  $XY$  is the interaction of the person with the system. While a little more complex, the theory still holds. The single equation with two unknowns cannot be solved.

In *The New Economics*, (Page 94) Dr. Deming writes: "A manager of people has to understand that all people are different. This is not ranking of people. He needs to understand that the performance of anyone is governed largely by the system he works in. the responsibility of management. A psychologist that possesses even a crude understanding of variation as will be learned in the experiment with the Red Beads could no longer participate in refinement of a plan for ranking people."

My conclusion is that the system contributes more to the outcome of any process than the people working in the system. That being true, we should eliminate the annual review because it is UNFAIR to rate and rank the people. It is not because you will make the people feel bad.

Lastly, during our phone conversation I want to solicit from the folks who participate any improvement strategies they are undertaken in their organizations. I hope they will share what they did, how they did it, and what tools for quality improvement were used to effect the change.

I do this because I feel that the process improvement strategies that were so prevalent in the early days of the Deming Quality Movement are not being shared today. I don't see examples of the quality tools being used to further the health of organizations.

Does anyone remember in the 1980's Don Wheeler's, "The Japanese Control Chart"? Boring as it was, we used it because it was and is a powerful example.

I remember Bill Conway of the Nashua Corporation saying that he wondered why, when he was within 100 miles of the lumber he used to produce paper the Japanese would take the lumber all the way across the Pacific Ocean, create paper of a higher quality and sell

it at a lower cost than he could. He then proceeded to tell the specific changes he made to his process; machines, raw material, dyes, training, and the list goes on. He turned his company around but it was with specific process changes.

A Navy Admiral at the Aviation Supply Office originally wasn't a big supporter of Total Quality Leadership (Navy's title) but he reluctantly initiated training and teams in his organization. A few months later he was giving talks on the actual millions of dollars that were saved by the ideas brought forth regarding how they did contracts and the material they purchased.

Certainly, specific improvement changes were legend as we heard from Ford (Peterson) and General Motors (helped by Ron Moen). The Batavia Transmission Story became a "Must See" for how important it was to reduce variation of a process around respective target values, viewed as a system. Today, I am not hearing those reports of actual process improvement and the tools used to bring them about.

One of the best books we read when Deming was alive was, "The Team Handbook". It instructed on how to form teams for improvement, defined the tools used to investigate possible changes and track results, and helped companies to a full strategy of process improvement. Today I hear briefs that mention the PDSA (Plan, Do, Study, Act) cycle, but I don't hear anyone instructing on the "tools" a group should use at each stage of the cycle. For instance, in the Planning phase, groups should use data collection, histograms, Pareto charts, fishbone diagrams, brainstorming, and perhaps control charts to determine if there is a problem and what they might do to improve performance. The Nominal Group Technique could be effectively used to determine possible actions (the Do phase) and finally the Study phase would employ once again data gathering tools and portrayal. At this point, the Control Chart might well be the most powerful indicator of improvement accomplished. This type of discipline will result in effective use of the PDSA cycle.

When Bill Cooper and I were consulting in the Management Theory of Dr. Deming, we made it a point to balance Theory and Tools. We taught process flow charts, fishbone diagrams, affinity diagrams, Pareto Charts and Control Charts. We showed many examples, and showed folks how they could construct and use the tools in their organizations. We taught a Facilitator Training Course so that organizations could use their own employees to accomplish process improvements. I'm hoping that formal organization of teams and working with the quality tools continues in our companies today. I'm not sure it does.

I conclude by hoping that our phone call will be interactive sharing about improvement strategies that are happening today in organizations. I look forward to hearing what those who join in have to say.

## **BIOGRAPHY**

Phil Monroe served eight years on the Coronado City Council. Prior to that, he served five years on the Coronado Planning Commission, the last two years as Chairman. Phil represented Coronado on the SANDAG Board and the San Diego Metropolitan Transit System Board for six years. For thirty years he was an Officer in the U.S. Navy where he held positions in engineering, logistics, and direct fleet support areas. When Phil was Commanding Officer at the Naval Air Rework Facility, North Island, he introduced the Deming management theory to that organization which employed 5,500 personnel and managed an annual budget of over \$400 million dollars.

After leaving the Navy, Phil consulted with major companies, helping them develop their Quality Improvement and Performance Measurement implementation strategy. Phil has a unique talent that helps organizations connect their strategic plans to a meaningful measurement strategy. His friendly style and “How to” approach clarify key points to promote learning.

Phil was a founding member of the In2:InThinking Network's Board of Directors. He currently serves on the board of the Coronado Historical Association, the Coronado Tennis Association and is a member of the Board of Full Access Coordinated Transportation (FACT) that works to meet the transportation needs of Seniors, the disabled, and people in Social Service Programs.

Mr. Monroe's degrees include a BA (Mathematics) from Cornell University and an Engineers Degree in Aeronautical Engineering (AeE) from the Naval Postgraduate School. Hobbies include tennis, golf, and rollerblading.

## **CONTACT**

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