

Twenty-five to 30 years ago, quality books focused on the technology of quality and did not have a strong emphasis on business. Managers took for granted the quality of the reports from the standard cost accounting system and didn't concern themselves with the financial aspects of poor quality. In other words, the language of quality did not include the vocabulary of finance. Then, in 1979, Philip B. Crosby wrote *Quality Is Free* and changed things forever.

Crosby had a way of expressing himself that led to clarity. His down-to-earth wisdom came from his roots working on the shop floor. He communicated with common words, and he considered it his responsibility to communicate his message clearly. However, he also spoke the language of management—finance and accounting—and used it to convey the idea that poor quality affects the bottom line. None of this is surprising when put into the context of his last years in life, when I got to know him personally. He once told me he didn't consider himself a manager or a consultant, but a writer. This explained my earlier observations regarding why he cared so much about his communications. Crosby was a communicator with a message that mattered. When I first read *Quality Is Free*, it was 4 years old and already a bestselling business book. It was given to me by Hal Phillips, quality manager of my division at Hewlett-Packard, with the words, "Here's what you need to know about business and quality."

This book wasn't merely great for its day; it was timeless. What did Crosby have to say that is so important today? Three messages struck me on my initial reading: zero defects means defect prevention; the cost of poor quality is the financial result of nonconformance to requirements; and quality is a journey toward maturity. Why did these ideas strike me at that time? Yes, they were profound, but more important, they represented common sense and were aligned with my idealistic, youthful view of the world. I had heard about zero defects during my career in the Navy. I didn't know anything about it, but it made sense. So did the idea that the cost of poor quality could be measured as the results of nonconformance to customer requirements. It was such a brilliant stroke of the obvious; I didn't understand how people could argue against it. I also believed all natural processes had a growth function, so the quality journey toward wisdom and maturity further aligned with my world view. While Crosby had many deep insights about the absolutes of quality, I internalized his ideas from *Quality Is Free* in a very different way. Although today's quality lingo appears in the language of Six Sigma, the Malcolm Baldrige National Quality Award criteria and ISO 9000, I believe Crosby's words are also appropriate for our times. To help illustrate my point, I selected a baker's dozen of my favorite quotations from Crosby's book and described how each applies today.

### 1. The cost of quality is the expense of DOING THINGS WRONG

Crosby recognized the management system had baked the cost of quality into its normal way of doing business. He objected to the practice of defining an acceptable quality level for performance, as if the customer were always willing to pay for a constant defect rate of 1 to 3%. Instead, Crosby focused management on using financial measures to indicate what was wrong, rather than allowing it to accept the situation as a 1% problem. Today's Six Sigma methods have revitalized the interest in linking financial performance measures to operational performance measures by focusing on the calculation of defects per million opportunities for quality characteristics that are critical to customer satisfaction.

### 2. It is always cheaper to do the job RIGHT THE FIRST TIME

Cost is accrued as defects are detected and corrected further from their source. Designing products right and producing them to the design is the most cost effective way to embed quality characteristics into products. This is the emphasis of design for Six Sigma. Consistency of process performance—creating predictable factories for work processes—is the emphasis of Six Sigma.

### 3. Most things don't work like they are SUPPOSED to work

The magnitude of the problem of poor quality becomes obvious when you look at it from a broader perspective. Hardly anything happens without a hitch. Perhaps Murphy's Law is so appealing because it describes the common experiences we have at work. People who rely on an expected outcome will be disappointed, and if this happens frequently enough, they will become frustrated and seek alternative solutions. When a product is designed to work in a process, it is designed to operate at a specific process capability. In reality, however, it may never meet its ideal target and end up operating off-target at a different process capability. The gap between these two capabilities indicates a lack of discipline in process performance

that results from not maintaining the designed standard of performance.

**“PROBLEMS BREED PROBLEMS, and the lack of a disciplined method of openly attacking them BREEDS MORE PROBLEMS.”<sup>4</sup>**

One problem people encounter when seeking an alternative solution is they will likely create even more problems for themselves if they don't have a disciplined method for attacking and resolving the problem.

While Crosby is not considered a statistician, he was a strong advocate for the use of basic statistical tools and disciplined problem solving methods.

**“We must define quality as CONFORMANCE TO REQUIREMENTS if we are to manage it.”<sup>5</sup>**

The starting point in any analysis is to define the problem clearly. Characteristics we seek to improve must be defined, and a standard of performance must be specified. Quality is the ability to meet this performance requirement.

**“The customer DESERVES to receive EXACTLY what we have PROMISED TO PRODUCE.”<sup>6</sup>**

Crosby equates performance to promise with organizational integrity. He was a strong customer advocate, and this drove his business emphasis.

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**“ZERO DEFECTS is the attitude of defect prevention. It means ‘do the job right the first time.’”<sup>7</sup>**

Many have confused the concept of zero defects with the idea of perfection. But this is not what Crosby had in mind. Zero defects is a concept of flawless execution against a customer imposed performance standard. Customer requirements must be defined. Once they have been discovered and a standard has been set, then it is possible to measure quality performance against this standard and work on consistent delivery of the performance promise. The proof of excellence is in preventing problems, not in finding them and fixing them fast.

**“It only takes ONE BAD BIT OF DATA in the chain to disturb the effectiveness and accuracy.”<sup>8</sup>**

Problems with data integrity—data presenting a biased picture rather than indicating what is actually happening—must be resolved before any improvement is possible. The process and product measurement systems must be precise and accurate and must measure the right thing in terms of the customer's requirements. This thinking led to the Six Sigma problem solving sequence (define, measure, analyze, improve, control), which puts measurement ahead of analysis to emphasize the

relationship between data integrity and process knowledge.

**“DON’T GET LOST in statistical swamps.”<sup>9</sup>**

Crosby took a practical, applied approach to statistics. I took one mathematical statistics course in which we focused so much on theory and the proof of the central limit theorem that we neglected to ask how it could be used in practice. Had I a more pragmatic than theoretical approach to applying statistical methods, I wouldn’t have lost more than 10 years of better judgments. This is a real advantage of Six Sigma today because it focuses on the practical application of statistics while permitting the theory and advanced methods to come from the higher level belts.

**“If you don’t know what the defect level is, HOW DO YOU KNOW when to get mad?”<sup>10</sup>**

Crosby felt righteous indignation about organizations not delivering on the promise to the customer. For a company to act effectively on the customer’s behalf, work must be measured to define and detect defects and then be analyzed to identify and eliminate the root cause of the problems. Crosby’s approach to problem solving focused on both corrective action (stop the bleeding) and preventive action (make the patient healthy). Measurement is a key ingredient to success in all business improvement systems.

**“A good follower WANTS THE SAME RESULTS as the leader wants.”<sup>11</sup>**

Congruence in the pursuit of common goals is essential for organizations to succeed. While it is a leader’s job to set the strategic direction and determine the necessary results, it is the organization’s job to support these goals. An organization becomes reliable when it embraces the shared vision, believes in the common goals and uses the measurement system to validate progress toward the established results. Crosby believed the best way to gain support and participation in management’s improvement effort was to ask employees to set aligned objectives and define integrated work processes with adequate measures.

**“Reality is the ULTIMATE CRITERION.”<sup>12</sup>**

How do you measure success? Not by a few milestones on a journey and not by the accomplishment of artificial program activities or progress on a timeline. The criterion for success in a business is its performance in the marketplace, where customers vote on its ability to deliver the right performance promise.

**“It is NOT POSSIBLE to KNOW what you need to learn.”<sup>13</sup>**

The journey to maturity in quality is a continuous, step-by-step process. It requires constant refreshment

of skills and renewal of enthusiasm. One cannot be done learning because there is so much to know. The Six Sigma belt structure recognizes this fact and builds

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learning levels into its structure to define a pathway toward maturity, just as Crosby built them into a quality maturity grid.

### Quality's Enduring Value Proposition

In the dedication to *Quality Is Free*, Crosby quoted Harold S. Geneen, the CEO of ITT: "Quality is not only right, it is free. And it is not only free, it is the most profitable product line that we have."<sup>14</sup> Crosby was not the first to speak about cost of quality—that recognition goes to Armand V. Feigenbaum, who created total quality control. Crosby was also not the first to identify value as a focus in business—that recognition goes to Larry D. Miles, who created value engineering. However, Crosby did find a way to communicate that got the attention of business leaders and caused them to consider quality as a strategy for business improvement. He spoke both the language of the people and the language of the leaders—and both listened.

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