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Beware the Product Death Cycle

The quality wars were allegedly won in the 1980s. Why, then, are we again overwhelmed by junk?

by Art Kleiner

Back in November 1980, the Pulitzer Prize-winning historian Barbara Tuchman asserted in the *New York Times Magazine* that the quality of civilization was going downhill. Mass production, she wrote, had rendered the devices and luxuries of the good life — furniture, watches, clothes, toys — more plentiful than ever. But these products were not as durable, as reliable, or as pleasing as their handmade preindustrial counterparts. Her article, titled “The Decline of Quality” and published as a cover story in the magazine, was fiercely passionate. Society was filling up with junk, and it was up to all of us to rescue it, she declared.

Ms. Tuchman probably didn’t know it, but manufacturers were starting to agree with her. Spurred by the threat of Japanese competition and suffering their own painful loss of market share, a number of American and European corporations adopted a set of process management ideas in the early 1980s known generally as “total quality management,” or TQM. Incorporating in-depth statistical produc-

tion analysis and some pioneering approaches to participative management, TQM later spun off a host of popular management concepts, including Six Sigma. Maestros of quality-oriented management such as W. Edwards Deming and Joseph Juran demonstrated to American business audiences that they could bring the spirit of elite craftsmanship into mass production without adding cost.

Quality improvement might have required up-front investment, but it ultimately reduced costs by cutting waste and eliminating rework and repairs. By the early 1990s, after a decade of quality practice, there was an almost utopian sense in the air that consumer goods, from toaster ovens to high-tech computer devices, would never stop improving, and the quality of life would get better and better.

Those were the days. For the past few years, it has appeared that U.S. corporations are once again employing strategies that emphasize short-term gains from the production of cheaply made, junky products. Kitchen appliances, power tools, cell phones, computer printers, DVD players, toys, and many



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other consumer goods are increasingly conceived and sold as disposable commodities. Although these products have more features and capabilities every year, their durability and longevity are rapidly dwindling.

As in the 1970s, this strategy poses serious dangers — from the erosion of well-established brands to the ultimate financial failure of companies. But it may be harder now to reverse the tide, because several trends in manufacturing and marketing subtly reinforce one another. Instead of facing competition from high-quality Japanese manufacturers, companies in industrialized countries face tough competition from low-wage countries and high price-cutting pressure from global retailers. Even when producers do promote quality, far fewer consumers seem to care. In this environment, many firms now seem to perceive the production of shoddy products as an effective bottom-line strategy. But giving in to this increasingly irresistible temptation can put a company’s future market share and profits at risk.

Anecdotes and Evidence

Has product quality really declined that much since the early 1990s? Admittedly, much of the evidence is anecdotal. But its sources are diverse: repair shop technicians, weblog gripes, current and former TQM consultants, and myriad acquaintances with stories of annoyance. Lamp housings crack; videocassette recorders rewind slowly and haltingly; cell phone batteries fall out; shirt buttons crumble; washing machines falter; televisions render flesh tones in rainbow hues.

Overall automobile performance is better, but many vehicle components are still maddeningly

fragile. For instance, the dashboard “idiot light” on many cars signals a mysterious computer-detected malfunction somewhere in the engine (often in the sensors tied to the catalytic converter). It typically requires a repair shop visit to diagnose and shut off the light. But then, a day or two after the ostensible repair, the light reactivates itself, like a movie monster that cannot be killed. Our European-make family auto was thus afflicted, and after bringing it in four times to my local dealer, I finally exploded in frustration. “Only four times?” the repair shop manager asked. “Some people come back *10* times with this problem.” He advised me to ignore the warning light. “Just don’t tell anyone I said that.”

There also is empirical evidence of declining product quality — evidence that Barbara Tuchman didn’t have at her disposal back in 1980. Since 1994, for example, the American Society for Quality and the University of Michigan have co-sponsored the American Customer Satisfaction Index (ACSI), based on customer surveys. Overall, ACSI ratings of manufactured goods have basically held steady over time, but exceptional companies (notably Dell and Apple, with satisfaction increases of 9.7 percent since 1997 and 5.2 percent since 1994, respectively) skew the results. Other big-name companies show deterioration, including companies that have invested millions of dollars in associating their brands with reliability and quality: Hewlett-Packard is down 9 percent in customer satisfaction since 1994, and several appliance manufacturers are down more than 4.5 percent. Even Six Sigma mainstay GE is down 2.5 percent. (A full table of this company data can be

found at www.theacsi.org.)

Consumers Union, the non-profit publisher of *Consumer Reports*, has kept track of product reliability through its consumer surveys of repair data. It also tracks the frequency of product recalls, which have risen steadily since 1990. Here, the trends are suggestive but inconclusive. Senior Editor Tod Marks, whose beat at *Consumer Reports* includes repair and reliability, notes that quality in many product categories is better overall than it used to

in the computer and electronics industries, is rising.

“It’s happening on so many dimensions,” says Greg Brue, president of Albuquerque-based Six Sigma Consultants and author of *Design for Six Sigma* (McGraw-Hill, 2003). “Companies are going to shorter and shorter warranties, and dealing with more and more repairs, and responding with rebates and price promotions instead of improving their products — and they feel like they’re getting away with it.”

tating product failures and flaws far more than they used to, even when they have more channels (such as the Internet) through which to voice complaints. Presumably, consumers’ tolerance for poor product quality and short-lived products is higher because it costs less today to replace a broken toy, cordless drill, or VCR. As Tod Marks of *Consumer Reports* observes: “In the early 1990s, we found that if a product cost \$30 or less, people wouldn’t bother to get it fixed. But as the years went by, that price point has steadily gone up — now, it’s probably at about \$100.”

There are other contributing factors. TQM has lost its cachet inside many companies. Since Dr. Deming died in 1993, the number of faculty teaching quality in business schools has dwindled, and so has student interest. Although quality practices still have a place in many companies — and have moved beyond the factory floor — TQM doesn’t capture the attention of as many senior executives as it once did.

Chinese manufacturers have shown that you don’t have to offer quality to compete if you can slash prices enough. “I see no evidence of the managers and workers at these facilities having the slightest concept of quality,” says John Dowd, an American quality expert who has visited dozens of Chinese factories. “They will comply with customer requirements when they are monitored closely, but left alone, it’s strictly ‘Get it out the door.’”

Retailers are also culpable because of their increasingly aggressive price bargaining. And new retail devices, like the extended warranty, also play a role. The extended warranty first emerged in the 1980s as a

“Companies are going to shorter warranties,” one consultant says, “and they’re getting away with it.”

be. (When was the last time you experienced a tire blowout or a picture tube failure?)

Still, many product manufacturers have lowered engineering standards to shave their costs. “One thing that often goes wrong with a videocassette recorder is the loading mechanism,” Mr. Marks says. “That used to be metal, attached with screws. Now it’s a piece of extruded plastic fused to the chassis.”

The most solid empirical evidence on product quality involves warranty statistics, such as the number of units returned each year to retailers (and hence to manufacturers) for repair or replacement under warranty. But the Financial Accounting Standards Board began requiring manufacturers to disclose this information only in early 2003, and there has never been any systematic analysis of warranty costs as a percentage of revenues. However, three veteran quality consultants told me that the number of warranty returns they see, particularly

People at both Consumers Union and ACSI argue that products aren’t necessarily getting worse. Indeed, technical conformance to standards is going up, says ACSI Managing Director David Van Amburg. It is just that “customer expectations are going up faster than the ability of the companies to meet them.” This doesn’t fully account for either the statistics or the stories, however. In the end, only one conclusion seems to fit: In every product category, a few good brands continue to improve their durability and reliability. The good get better, and the rest get worse.

Unplanned Obsolescence

A consumer advocate might argue (as many did back in the 1970s) that the culprit is planned obsolescence. Companies deliberately design shabby products so customers will keep replacing them with new ones.

But reality is not so simple. Consumers themselves tolerate irri-

high-priced form of product insurance that allowed corporations to hedge their warranty protection costs. The typical extended warranty, which is a contract many retailers try to bundle with a product purchase, provides consumers with an extra year or two of either replacement or repairs. Gradually, the extended warranty has become a way of life for U.S. electronics and appliance retailers; in-store and call-center salespeople are often given incentive pay for every extended warranty they sell. *Stores* magazine, a

Greg Brue, the Six Sigma consultant, says of one computer peripherals company that he works with, “They have more revenue coming from processing extended warranties, refurbishing the returned units, and sending them back out than they do in getting the product right the first time.”

Mr. Brue made me realize the extent to which the decline of product quality is a cultural Rubicon for companies — a potential point of no return on the road to eroded market share. He claims he can pre-

sistently stronger bottom lines over the long term than those whose product quality erodes more rapidly. These financial results don’t show up immediately; they typically appear five years or more after the product is introduced.

In other words, consumers stop buying products and brands they think are likely to break down. Although many top executives may decide that product failures and loyalty erosion aren’t all that important in the larger scheme of business, Mr. Brue says that’s not a responsible fiduciary attitude. “A product failure leaves a scar in a company’s reputation,” he says. “It makes the consumer wonder: Will the company get the next one right?”

Anecdotal history certainly supports the theory. I notice myself shying away from electronic, automotive, and household brands after one or two bad experiences. Mr. Brue believes I’m more typical than manufacturers realize. The value of a product, in this computerized age, is not determined just by its cost or price. It’s deeply linked to the experiences people have with it. We take a telephone or a coffeemaker into our lives. We learn how to program and control it; we meld our habits with its controls; we don’t really want to replace it. Companies that expect otherwise will see their market share erode.

No Way Out

Several experts argue that the solution to our latest quality crisis will emerge on its own from competition and innovation. Jack West, past president of the American Society for Quality, says that even Chinese companies are choosing to adopt Six Sigma techniques.

New technologies like radio fre-

Extended warranties make it easier to justify buying products that you fear might fall apart.

retail trade journal, estimates that more than \$5 billion worth of extended warranties were sold in North America in 2002.

Consumer Reports routinely warns its readers against extended warranties; at 10 to 30 percent of a product’s retail price, they’re statistically more expensive than the aggregate cost of simply replacing products when they fail. But these warranties are popular nonetheless, presumably because of the sense of security they provide to customers. When you have an extended warranty, it is easier to justify buying a DVD player or telephone that you fear might fall apart. But this sets up an almost irresistible perverse incentive for manufacturers. Not only is it easier for them to make goods that aren’t durable, manufacturers can now profitably “double dip.” This means when they receive a failed device, they can replace its broken parts and sell it again, not as “pre-owned” or refurbished, but as new.

dict whether marketers will lose customer loyalty five years from now on the basis of their profile of warranty costs today.

To Mr. Brue, there are two categories of products that retailers sell, each with its own pattern of deterioration — or (though he doesn’t use this phrase, it seems to fit) its own “product death cycle.” Both categories are engineered to stand up to normal wear and tear for the first year or so. But then the death cycles begin to differ. The first group of products show return and repair statistics that rise fairly rapidly after the warranty expiration date. The second category has lower return and repair rates, even after the warranty expires.

Having tracked these statistics for a range of client companies, Mr. Brue says they correlate consistently with profitability in the long run. Companies that produce products with lower return rates after the warranty expires tend to have con-

quency identification (RFID) chips also offer hope. If your DVD player needs a new loading tray, the RFID chip will detect the problem, notify the factory, and arrange delivery of the proper replacement part, ready to snap into place.

But it's not self-evident that manufacturing companies will change as easily as they did in the 1980s. The advancing microchip, the falling price of products, and the global manufacturing environment may have permanently changed attitudes about product quality and the competitive environment in many industries.

Rather than retooling for continual upgradeability, manufacturers may simply assume unending consumer tolerance, and slide down the slope of cost reductions and quality erosion. Many former major brand producers will survive as commodity makers of retail house brands, with devices engineered for replacement every year or so. Consumers will live amid perpetually new things, tossing the discards into landfills. Barbara Tuchman's fears will then finally come to pass.

And who will care? Maybe only the last few managers, of the last few quality brands, who, like monks in the Dark Ages, keep alive an ideal that others have forgotten — and derive premium profits that nobody else understands. +

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