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Quality—If Time Permits

Twentieth-century psychological theory holds that man's character is dominated by a small number of basic instincts: survival, self-esteem, reproduction, territory, and so forth. These are built directly into the brain's firmware. You can consider these instincts intellectually without great passion (that's what you're doing now), but when you *feel* them, there is always passion involved. Even the slightest challenge to one of these built-in values can be upsetting.

Whenever strong emotions are aroused, it's an indication that one of the brain's instinctive values has been threatened. A novice manager may believe that work can be completed without people's emotions ever getting involved, but if you have any experience at all as a manager, you have learned the opposite. Our work gives us plenty of opportunity to exercise the emotions.

Chances are, you can think of at least one incident when a person's emotions did flare up as a direct result of something purely work-related. Consider that incident now and ask yourself (probably for the *n*th time), Where did all the emotion come from? Without knowing anything about your specific incident, we're willing to bet that threatened self-esteem was a factor. There may be many and varied causes of emotional reaction in one's personal life, but in the workplace, the major arouser of emotions is threatened self-esteem.

We all tend to tie our self-esteem strongly to the quality of the product we produce—not the *quantity* of product, but the *quality*. (For some reason, there is little satisfaction in turning out huge amounts of mediocre stuff, although that may be just what's required for a given situation.) Any step you take that may jeopardize the quality of the product is likely to set the emotions of your staff directly against you.

The Flight from Excellence

Managers jeopardize product quality by setting unreachable deadlines. They don't think about their action in such terms; they think rather that what they're doing is throwing down an interesting challenge to their workers, something to help them strive for excellence.

Experienced (jaded) workers know otherwise. They know that under the gun, their efforts will be overconstrained. There will be no freedom to trade off resources to make on-time delivery possible. They won't have the option of more people or reduced function. The only thing to give on will be quality. Workers kept under extreme time pressure will begin to sacrifice quality. They will push problems under the rug to be dealt with later or foisted off onto the product's end user. They will deliver products that are unstable and not really complete. They will hate what they're doing, but what other choice do they have?

The hard-nosed, real-world manager part of you has an answer to all this: "Some of my folks would tinker forever with a task, all in the name of 'Quality.' But the market doesn't give a damn about that much quality—it's screaming for the product to be delivered yesterday and will accept it even in a quick-and-dirty state." In many cases, you may be right about the market, but the decision to pressure people into delivering a product that doesn't measure up to their own quality standards is almost always a mistake.

We managers tend to think of quality as just another attribute of the product, something that may be supplied in varying degrees according to the needs of the marketplace. It's like the chocolate sauce you pour onto a homemade sundae: more for people who want more, and less for people who want less.

The builders' view of quality, on the other hand, is very different. Since their self-esteem is strongly tied to the quality of the product, they tend to impose quality standards of their own. The minimum that will satisfy them is more or less the best quality they have achieved in the past. This is invariably a higher standard than what the market requires and is willing to pay for.

"But the market doesn't give a damn about that much quality." Read those words and weep, because they are almost always true. People may talk in glowing terms about quality or complain bitterly about its absence, but when it comes time to pay the price for quality, their true values become apparent. On a software project, for instance, you might be able to make the following kind of presentation to your users: "We can extrapolate from empirical evidence that the Mean Time Between Failures for this product is now approximately 1.2 hours. So, if we deliver it to you today, on time, it will have very poor stability. If we put in another three weeks, we can forecast MTBF of approximately two thousand hours, a rather respectable result." Expect to see some Olympic-class hemming and hawing. The users will explain that they are as quality-conscious as the next fellow, but three weeks is real money.

Speaking of software, that industry has accustomed its clients to accept in-house-developed application programs with an average defect density of one to three defects per hundred lines of code! With sublime irony, this disastrous record is often blamed on poor quality consciousness of the builders. That is, those same folks who are chided for being inclined to "tinker forever with a program, all in the name of 'Quality'" are also getting blamed when quality is low. Let's put the blame where it belongs. He who pays the piper is calling for a low-quality tune. By regularly putting the development process under extreme time pressure and then accepting poor-quality products, the software user community has shown its true quality standard.

All of this may sound like a diatribe against software users and against the standards of the marketplace in general, but it needn't be taken that way. We have to assume that the people who pay for our work are of sound enough mind to make a sensible trade-off between quality and cost. The point here is that the client's perceived needs for quality in the product are often not as great as those of the builder. There is a natural conflict. Reducing the quality of a product is likely to cause some people not to buy, but the reduced market penetration that results from virtually any such quality reduction will often be more than offset by increased profit on each item sold.

Allowing the standard of quality to be set by the buyer, rather than the builder, is what we call *the flight from excellence.* A market-derived quality standard seems to make good sense only as long as you ignore the effect on the builder's attitude and effectiveness.

In the long run, market-based quality costs more. The lesson here is,

> *Quality, far beyond that required by the end user, is a means to higher productivity.*

If you doubt that notion, imagine the following gedankenexperiment: Ask a hundred people on the street what organization or culture or nation is famous for high quality. We predict that more than half the people today would answer, "Japan." Now ask a different hundred people what organization or culture or nation is famous for high productivity. Again, the majority can be expected to mention, "Japan." The nation that is an acknowledged quality leader is also known for its high productivity.

Wait a minute. How is it possible that higher quality coexists with higher productivity? That flies in the face of the common wisdom that adding quality to a product means you pay more to build it. For a clue, read the words of Tajima and Matsubara, two of the most respected commentators on the Japanese phenomenon:

> *The trade-off between price and quality does not exist in Japan. Rather, the idea that high quality brings on cost reduction is widely accepted.*[1]

Quality Is Free, But . . .

Philip Crosby presented this same concept in his book *Quality Is Free*, published in 1979. In this work, Crosby gave numerous examples and a sound rationale for the idea that letting the builder set a satisfying quality standard of his own will result in a productivity gain sufficient to offset the cost of improved quality.

We have an awful inkling that Crosby's book has done more harm than good in industry. The problem is that the great majority of managers haven't read it, but everybody has heard the title. The title has become the whole message. Managers everywhere are enthusing over quality: "The sky's the limit for quality, we'll have as much free quality as we can get!" This hardly boils down to a positive quality consciousness. The attitude is just the opposite of what Crosby advocates.

The real message of the linked quality and productivity effects needs to be presented in slightly different terms:

> *Quality is free, but only to those who are willing to pay heavily for it.*

The organization that is willing to budget only zero dollars and zero cents for quality will always get its money's worth. A policy of "Quality—If Time Permits" will assure that no quality at all sneaks into the product.

Hewlett-Packard has long been an example of an organization that reaps the benefits from increased productivity due to high, builder-set quality standards. From its beginning, the company has made a cult of quality. In such an environment, the argument that more time or money is needed to produce a high-quality product is generally not heard. The result is that developers know they are part of a culture that delivers quality beyond what the

1. D. Tajima and T. Matsubara, "Inside the Japanese Software Industry," *Computer,* Vol. 17 (March 1984), p. 40.

marketplace requires. Their sense of quality identification works for increased job satisfaction and some of the lowest turnover figures seen anywhere in the industry.

Power of Veto

In some Japanese companies, notably Hitachi Software and parts of Fujitsu, the project team has an effective power of veto over delivery of what they believe to be a not-yet-ready product. No matter that the client would be willing to accept even a substandard product, the team can insist that delivery wait until its own standards are achieved. Of course, project managers are under the same pressure there that they are here: They're being pressed to deliver something, anything, right away. But enough of a quality culture has been built up so that these Japanese managers know better than to bully their workers into settling for lower quality.

Could you give your people power of veto over delivery? Of course, it would take nerves of steel, at least the first time. Your principal concern would be that Parkinson's Law would be working against you. That's an important enough subject to warrant a chapter of its own.