Fix the machine, not the person

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This post is part seven of the series Raw Nerve.

The General Motors plant in Fremont was a disaster. "Everything was a fight," the head of the union admits. "They spent more time on grievances and on things like that than they did on producing cars. They had strikes all the time. It was just chaos constantly. … It was considered the worst workforce in the automobile industry in the United States."

"One of the expressions was, you can buy anything you want in the GM plant in Fremont," adds Jeffrey Liker, a professor who studied the plant. "If you want sex, if you want drugs, if you want alcohol, it's there. During breaks, during lunch time, if you want to gamble illegally—any illegal activity was available for the asking within that plant." Absenteeism was so bad that some mornings they didn't have enough employees to start the assembly line; they had to go across the street and drag people out of the bar.

When management tried to punish workers, workers tried to punish them right back: scratching cars, loosening parts in hard-to-reach places, filing union grievances, sometimes even building cars unsafely. It was war.

In 1982, GM finally closed the plant. But the very next year, when Toyota was planning to start its first plant in the US, it decided to partner with GM to reopen it, hiring back the same old disastrous workers into the very same jobs. And so began the most fascinating experiment in management history.

Toyota flew this rowdy crew to Japan, to see an entirely different way of working: The Toyota Way. At Toyota, labor and management considered themselves on the same team; when workers got stuck, managers didn't yell at them, but asked how they could help and solicited suggestions. It was a revelation. "You had union workers—grizzled old folks that had worked on the plant floor for 30 years, and they were hugging their Japanese counterparts, just absolutely in tears," recalls their Toyota trainer. "And it might sound flowery to say 25 years later, but they had had such a powerful emotional experience of learning a new way of working, a way that people could actually work together collaboratively—as a team."

Three months after they got back to the US and reopened the plant, everything had changed. Grievances and absenteeism fell away and workers started saying they actually enjoyed coming to work. The Fremont factory, once one of the worst in the US, had skyrocketed to become the best. The cars they made got near-perfect quality ratings. And the cost to make them had plummeted. It wasn't the workers who were the problem; it was the system.[1]

An organization is not just a pile of people, it's also a set of structures. It's almost like a machine made of men and women. Think of an assembly line. If you just took a bunch of people and threw them in a warehouse with a bunch of car parts and a manual, it'd probably be a disaster. Instead, a careful structure has been built: car parts roll down on a conveyor belt, each worker does one step of the process, everything is carefully designed and routinized. Order out of chaos.

And when the system isn't working, it doesn't make sense to just yell at the people in it — any more than you'd try to fix a machine by yelling at the gears. True, sometimes you have the wrong gears and need to replace them, but more often you're just using them in the wrong way. When there's a problem, you shouldn't get angry with the gears — you should fix the machine.

If you have goals in life, you're probably going to need some sort of organization. Even if it's an organization of just you, it's still helpful to think of it as a kind of machine. You don't need to do every part of the process yourself — you just need to set up the machine so that the right outcomes happen.

For example, let's say you want to build a treehouse in the backyard. You're great at sawing and hammering, but architecture is not your forte. You build and build, but the treehouses keep falling down. Sure, you can try to get better at architecture, develop a better design, but you can also step back, look at the machine as a whole, and decide to fire yourself as the architect. Instead, you find a friend who loves that sort of thing to design the treehouse for you and you stick to actually building it. After all, your goal was to build a treehouse whose design you like — does it really matter whether you're the one who actually designed it?[2]

Or let's say you really want to get in shape, but never remember to exercise. You can keep beating yourself up for your forgetfulness, or you can put a system in place. Maybe you have your roommate check to see that you exercise before you leave your house in the morning or you set a regular time to consistently go to the gym together. Life isn't a high school exam; you don't have to solve your problems on your own.

In 1967, Edward Jones and Victor Harris gathered a group of college students and asked them to judge another student's exam (the student was a fictional character, but let's call him Jim). The exam always had one question, asking Jim to write an essay on Fidel Castro "as if [he] were giving the opening statement in a debate." But what sort of essay Jim was supposed to write varied: some of them required Jim to write a *defense* of Castro, others required Jim to write a *critique* of Castro, the rest left the choice up to Jim. The kids in the experiment

were asked to read Jim's essay and then were asked whether they thought Jim himself was pro- or anti-Castro.

Jones and Harris weren't expecting any shocking results here; their goal was just to show the obvious: that people would conclude Jim was pro-Castro when he voluntarily chose write to a pro-Castro essay, but not when he was forced to by the teacher. But what they found surprised them: even when the students could easily see the question *required* Jim to write a pro-Castro essay, they still rated Jim as significantly more pro-Castro. It seemed hard to believe. "Perhaps some of the subjects were inattentive and did not clearly understand the context," they suspected.

So they tried again. This time they explained the essay was written for a debate tournament, where the student had been randomly assigned to either the for or against side of the debate. They wrote it in big letters on the blackboard, just to make this perfectly clear. But again they got the same results — even more clearly this time. They still couldn't believe it. Maybe, they figured, students thought Jim's arguments were so compelling he must really believe them to be able to come up with them.

So they tried a third time — this time recording Jim on tape along with the experimenter *giving him the arguments* to use. Surely no one would think Jim came up with them on his own now. Again, the same striking results: students were persuaded Jim believed the arguments he said, even when they knew he had no choice in making them.[3]

This was an extreme case, but we make the same mistake all the time. We see a sloppily-parked car and we think "what a terrible driver," not "he must have been in a real hurry." Someone keeps bumping into you at a concert and you think "what a jerk," not "poor guy, people must keep bumping into him." A policeman beats up a protestor and we think "what an awful person," not "what terrible training." The mistake is so common that in 1977 Lee Ross decided to name it the "fundamental attribution error": we attribute people's behavior to their personality, not their situation.[4]

Our natural reaction when someone screws up is to get mad at them. This is what happened at the old GM plant: workers would make a mistake and management would yell and scream. If asked to explain the yelling, they'd probably say that since people don't like getting yelled at, it'd teach them be more careful next time.

But this explanation doesn't really add up. Do you think the workers liked screwing up? Do you think they enjoyed making crappy cars? Well, we don't have to speculate: we know the very same workers, when given the chance to do good work, took pride in it and started actually enjoying their jobs.

They're just like you, when you're trying to exercise but failing. Would it have helped to have your friend just yell and scream at you for being such a lazy loser? Probably not — it probably would have just made you feel worse. What worked wasn't yelling, but changing the system around you so that it was easier to do what you already wanted to do.

The same is true for other people. Chances are, they don't *want* to annoy you, they don't like screwing up. So what's going to work isn't yelling at them, but figuring out how to change the situation. Sometimes that means changing how you behave. Sometimes that means bringing another person into the mix. And sometimes it just means simple stuff, like changing the way things are laid out or putting up reminders.

At the old GM plant, in Fremont, workers were constantly screwing things up: "cars with engines put in backwards, cars without steering wheels or brakes. Some were so messed up they wouldn't start, and had to be towed off the line." Management would yell at the workers, but what could you do? Things were moving so fast. "A car a minute don't seem like it's moving that fast," noted one worker, "but when you don't get it, you're in the hole. There's nobody to pull you out at General Motors, so you're going to let something go."

At the Toyota plant, they didn't just let things go. There was a red cord running above the assembly line, known as an andon cord, and if you ever found yourself in the hole, all you had to do was pull it, and the whole line would stop. Management would come over and ask you how they could help, if there was a way they could fix the problem. And they'd actually listen — and do it!

You saw the results all over the factory: mats and cushions for the workers to kneel on; hanging shelves traveling along with the cars, carrying parts; special tools invented specifically to solve problems the workers had identified. Those little things added up to make a big difference.

When you're upset with someone, all you want to do is change the way they're acting. But you can't control what's inside a person's head. Yelling at them isn't going to make them come around, it's just going to make them more defiant, like the GM workers who keyed the cars they made.

No, you can't force other people to change. You can, however, change just about everything else. And usually, that's enough.

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1. This story has been told several places, but the quotes here are from Frank Langfitt with Brian Reed, "NUMMI," *This American Life* 403 (26 March

2010; visited 2012-09-23). Quotes are taken from the show's transcript which sometimes differ slightly from the aired version.

2. Some of the concepts and terms here were inspired by Ray Dalio, *Principles* (2001), part 2 (visited 2012-09-01).

3. Edward E. Jones and Victor A. Harris, "The Attribution of Attitudes," *Journal of Experimental Social Psychology* **3**:1 (January 1967), 1–24.

4. Lee Ross, "The Intuitive Psychologist and His Shortcomings: Distortions in the Attribution Process," *Advances in Experimental Social Psychology* **10** (1977), 173–220.