



Conversations of Maintenance by Joel Levitt

Can a conversation make a difference? Well sometimes a conversation can change the direction of your life. My father was a mechanical engineer. He had many interests but he ended up in engineering. He related a conversation he had when he started college in 1935. His first advisor cautioned him against engineering because he said there were no jobs for Jews in the engineering field. My father told him (politely) not to worry about his employment prospects but to just sign his forms so he could take the classes. My father always found employment and spent 50 years as a practicing engineer.

Conversations make a difference. When I was 14 this same engineer father took me aside before I went away to a folk festival. He gave me the short version of the birds and bees talk. He left the details to my mother but hit the high points himself. He told me that any girl I slept with I might have to live with for the rest of my life. Well for 10 years whenever I was with a girl I made damn sure I didn't fall asleep. So personal conversations we have with people can be powerful.

Public conversations can also be powerful. Just think of the power of the speaking of a Jesus, Buddha, Mohammed or Moses. These men's words continue to change the world thousands of years later. More recently Martin Luther King, Gandhi, and Mao said much to change people's lives. There are hundreds of people from every country in the world who have spoken in a way that makes a difference.

But what about us little people? Clearly no one I know qualifies as a Buddha or a Lincoln. As a teacher I often wonder if anything I say makes a difference with the businesses I work for. I like to think I make a difference. Many of the people who attend my training classes hope to go back to their employers and say something that will turn their situation around. So if conversations are important, and we want to make a difference in our organizations, how can we speak to make a difference?

To look at this we have to look into how people who do make a difference speak. These people speak in such a way that the listeners see something for themselves in the words. The listeners listen and see a glimpse of a better world or a glimpse of how to get something that they want. In some cases their speaking elevates or inspires us in others it appeals to our self interest. In all cases great people speak and we see something for ourselves.

Has anyone spoken to you in such a way to make a difference in your life?

An important question is "What stands in the way of us being great people or real leaders in maintenance?" In other words what stands in the way for maintenance folks to speak and to have the whole company see something for themselves and follow us? Maintenance has a great contribution to

make to the success of our organizations particularly in these tough times. Many of the lessons we've learned would be applicable to the whole organization.

What distinguishes the great maintenance leaders from the rest of the competent but not inspiring and leading practitioners?

Is it intelligence? There are many brilliant people who cannot get any traction for their ideas and projects. Some retreat after the first few failures and become cynical, resigned but still brilliantly intelligent.

Is it tenacity? If we were making a greatness stew, we would certainly add a good sized dose of tenacity. Yet maintenance people are already tenacious to the point of being bull headed. More tenacity might be a problem for everyone around us.

Is it talent? How many of us have seen talented people fail? Talented people face a serious problem in maintenance. No matter how talented you are, there are more problems than any human has resources to cope with. Talented people frequently excel but don't necessarily make it past the hurdle to greatness.

Is it discipline? We all know people who are extremely disciplined; who do good works and have their jobs and lives well organized but never seem to rise to the level of greatness.

We are looking at what makes a leader in maintenance. **Is it opportunity?** Often greatness is thrust upon people. Some of the most effective leaders just happened to be in the right place at the right time. Clearly opportunity is necessary but it is not everything.

Is it genetic? Some people may be born with the right combination of intelligence and tenacity to be successful in life. The problem with that is that if greatness is predetermined from birth then we can't do anything to change it. We might as well hang it up now since we can't change our genetics.

Is it contacts? "It's not who you are, it's who you know." How many people have heard that? This is very true. Give me a maintenance professional with a wide range of maintenance and vendor friends and I'll show you someone who can find an expert to help solve problems quickly. Is knowing more people going to make us great? Better possibly, but great?

Perhaps it is intention. Certainly intentionality is important to producing results. But too strong a drive makes people annoying and engenders resistance. This is the opposite of greatness. Greatness creates a charisma that people want to follow.

Of course it might be luck. A famous phrase is "It's better to be lucky than to be smart." That applies to maintenance like any other field. Even a dim manager can look good when the price of their product doubles. Remember how smart the oil companies looked when their prices shot up? But a great maintenance leader will, to some extent, make their own luck.

Some of you might be thinking we could make up a recipe for greatness from the ingredients mentioned above. But even with all that, there are hurdles, traps and impediments in the way of maintenance people who are reaching for the gold medal. I submit that what stands in the way of greatness might not be personal to us but is something going on in our organizations.

To illustrate this I want to take a little detour.

Now how many of you have raised kids? This is kind of a crazy question but how many of you have ever argued with your kids where you argued that they were smart, competent, or beautiful while they argued back that they were dumb, incompetent or ugly?

What is going on here? If you could hear inside the child's mind you would hear a story they tell themselves about themselves that takes them down a few notches and disempowers them. How is it, that a conversation they have in their own mind makes them feel incompetent?

When people tell themselves they are stupid, clumsy, or ugly, they limit what they can and can't do in the world. It even limits what they are willing to try. The scary thing is that it doesn't matter if these interior conversations are true or totally off the wall. Kids live inside of hundreds of these conversations. Some of the conversations are from the media, the Internet, friends, siblings, teachers and parents as to what is good, smart or beautiful. They measure themselves against these standards.

Think about it. If a girl thinks she is ugly or terrible at math, if a boy thinks he is bad at sports or reading, those thoughts will regulate how they act as well as how they feel about themselves. She could be beautiful; he might be fast and powerful in reality but that reality makes no difference to those kids. Their thoughts rule the way they see themselves. Those thoughts can become a prison.

Of course, kids are smart. They intuitively know that if they change the conversation about themselves they will likely change themselves. Did you ever notice how eager some kids are about going to a new school or summer camp? There where they are not known, they can create new conversations with new people they meet. People will take them at face value and treat them as a person with this or that attribute. To a great extent they can be anyone they want to be. All they have to do is create new conversations to live in and become.

Other kids are scared to go to a new school. They may be scared because the person they know themselves to be might come unanchored. That is a pretty scary prospect if you have something to lose. It's not so scary if you want to lose the (ugly or clumsy) self you knew yourself as.

What does all this have to do with managing maintenance? Good question. Is it possible that the limits to our greatness have to do with conversations about maintenance that we and others in our business community hear and repeat to ourselves? What if the reason we are the way we are is because there are disempowering conversations traveling around the organization?

There are all kinds of conversations within organizations just as there are all kinds of conversations among people. Most obvious are the out-front or visible conversations on everyone's lips which are part of the entire structure of the organization. These may be about the industry, profit levels, who has moved up or down: visible conversations are all the things about the company that people say out loud to each other.

There are also behind-the-scenes conversations. When someone is hired on, they hear the visible conversation when everyone is hanging out. They hear the more invisible conversations only when they are really considered one of the team.

The invisible conversations are just as powerful (sometimes more so) as the visible ones, but they are significantly harder to change. They include personal concerns about who you can trust or who is incompetent. They also include corporate-wide assessments such as “Management speaks with a forked tongue.” Is there an impact of these behind the scenes conversations? These behind-the-scenes conversations have tremendous impact on the conduct of maintenance and how maintenance personnel are treated.

The child lives inside a cloud of conversations. They learn who they are, what they can do and who they can be from the cloud. Organizations also have clouds of conversations. These clouds are almost as powerful for adults as they are for kids.

One example of a conversation is “that maintenance is a necessary evil”.

Before we deconstruct “Necessary evil” talk about what hidden conversations are below the surface at your company?

Let’s deconstruct this. What impact does such a conversation have? How do you act if you are a necessary evil? Is this kind of conversation the basis for a healthy relationship? How do you contribute as a necessary evil; indeed, why would you even want to? If you want to be all you can be, how far can you go when everyone says that you are a necessary evil?

“The necessary evil” conversation comes from the simple fact that maintenance doesn’t contribute directly to the manufacture or delivery of anything. In modern parlance we do not add value to the product. Modern organizations also agree that we are necessary. So the conversation “necessary evil” gets created.

Much of what consultants like myself contribute to maintenance is to offer new ways of looking at it. One such new viewpoint is to call maintenance “Capacity Assurance.” We can prove that good maintenance practices actually produce additional manufacturing capacity. The value of this added capacity usually dwarfs the cost of delivering maintenance services.

Like my friend Mark Goldstein told me: “more customers are being lost to businesses like yours due to equipment reliability problems, than quality issues. Today, too many companies are losing valued customers because in their rush to service increasing customer demand, their management overlooked the fact that Just-In-Time delivery depends on full plant throughput, and full plant equipment throughput is dependent on companies maintaining full plant equipment capacity! Too many senior company executives overlooked their responsibility to strengthen their maintenance operations and their continuing investment in plant maintenance. The result: Customer Loss!”

There is a problem here. On top of the existing conversation about being a necessary evil, talking about full plant capacity seems like putting lipstick on a pig. That is why these reframing exercises rarely work. All the positive thinking in the world cannot overcome the fact that the pig (maybe even an extremely attractive pig) is still a pig.

If maintenance departments are an expense only, how does an expense contribute to the success of the enterprise? A good expense is a dead (zero) expense. Do you see the uphill battle implicit in changing that conversation?

We are just talking about a conversation here. There are no personalities, no people involved and it is not in any way personal.

When we look at other businesses we can see this idea at work. It would be pretty crazy to look at your 40 man football team and tell the defensive players that they don't add value to the product (value in this case being the points on the score board). The owner could save some real money on salaries without all those defensive line men (not to mention the reduction in catering costs if you don't have to feed them).

OK, let's admit it would be crazy to run a football team without defense. If we translate the way companies view maintenance to the way football is managed, we would want as few defensemen as possible, pay them as little as possible, maybe even be creative and make one defense squad play for 2 different teams. By the way if the team loses we would downsize the defense.

Plays would be handled differently because of course we wouldn't try to design defensive strategies. If there is any defensive design it would be done by the defenders themselves without resources or support from management. From a management point of view when the ball is snapped the whole squad should run howling toward the ball (they are sure the howling would help morale).

Forget training and recruiting; just hire bodies. Especially forget respect. These folks don't contribute toward the score on the scoreboard. If times get tough, get rid of them altogether. It seems pretty silly in football. It's not silly in maintenance; unfortunately it is a way of life for some of us.

The all-too-frequent conversation of being a necessary evil greatly limits the contribution of maintenance to the success of the enterprise. We have to think up new conversations to take the place of the old. We have to think up new conversations that make more sense.

We could try out some new conversations right here. What if the conversation went something like this: We have different groups that support production and each contributes their specific expertise. The only issues are, "Does each group's specialized knowledge and skills contribute more to the bottom line than their cost? Is their expertise essential to the long term success and enhanced profitability of the organization?"

Let's look at a few of the players in a typical corporation. Lawyers contribute legal expertise. Accountants contribute accounting expertise. This seems pretty simple. If you have an accounting question you ask one of their experts. Likewise if you have a process question, an environmental question, or even a question about trash, you go to the person who covers that area. The trend today is to get rid of the expertise and use outside consultants. The outcome is the same; you want the specialist's advice to be more valuable than what you pay.

Of course at different sizes of organizations different expertise becomes important. In the 1980's I worked on a project to computerize the fleet maintenance operation of Federal Express. At the time FedEx operated 47,000 light trucks. They bought software from COSTROL designed by Jay Butler and it was the most advanced package of its day. Yet FedEx spent the money and time to ongoing tweak the package in order to wring out a few more percent of benefits. After all a small increase in the savings for 47,000 vehicles was quite a bit of money. In the case of large companies the specialized knowledge was worth it since the potential savings was so large.

The whole issue of using experts is not black and white. Business needs may trump expertise. For example the lawyers say that such-and-such is the way to structure an acquisition deal. The president decides to structure the deal differently. As long as the decision is within the law, the lawyers will support the CEO.

We have to answer the question what do we contribute to the success of the organization? Once we identify the contribution, are we positioned to make a maximal contribution based out our present skills, knowledge and attitudes? We also return to the question, "Does this specialized knowledge and skills contribute more to the bottom line than its cost?"

Discussion: What is your maintenance department really experts at?

Some departments represented in this room are experts in repairing breakdowns. This is the historical role of maintenance. They can fix just about anything. They have deep and subtle expertise in broken things, how things break and how to put them back together. And especially they know how to do that in the shortest time and with the least cost. There is no dishonor in contributing this expertise to the success of the organization. Fixing breakdowns is a real, valuable and essential expertise that is duplicated nowhere else in the company.

Consider this: most doctors are also experts in breakdowns. They troubleshoot the problem and if it is possible, propose a fix. They are done with their work (you are discharged) when the disease is gone from your system. In truth, very little of a doctor's training or practice is concerned with health. Mostly they wrestle with and hope to cure disease. And often that's enough; believe me when you are sick you don't want a lecture on preventative maintenance telling you that you should have given up smoking 10 years ago. You want action now.

Yet medicine is changing, as is maintenance.

The new, improved conversation might revolve around the idea that the contribution of maintenance departments to the success of the company is their expertise in asset, machine and unit health. We know how fast and how long to run the equipment in order to maximize profit. We are the folks who know what should be done for maximum equipment life, minimizing long term cost. In short we are the high priests of the balance between production and equipment integrity.

In fact part of this is already happening. In maintenance there is a burgeoning sub-field in machinery health. Machine health sub-fields include TPM, PM, PdM, RCM. Our conference rooms are full when the focus of the talk is on detecting failure before it happens and how to extend the life of the asset. Advanced maintenance departments are becoming experts in machinery health.

Join me in Joel Levitt's fantasy world and imagine that over the door is a sign, "Department of Equipment Health."

What is missing for us to be able to expand into this role? There are three parts. The first part is that we continue to build expertise in machine health and push to change the focus from reactive to proactive maintenance. We continue to get really good at predicting what will occur based on historic data. Several things being discussed here at IMC are important to master including the alphabet soup: CMMS, RCM, FMEA, RCA, PM, PdM and CBM. Almost all maintenance departments are already either working on this or saying that they are working on this.

The second part of this new expertise is to master the operating modes and conditions of the equipment. We know what happens in the operation and how it is likely to impact the life of the equipment. We must be able to answer the question "What will happen if we double the capacity of the feeder" or "What if we speed up the conveyor?" This requires deep knowledge of process, additional knowledge about engineering and some knowledge of the market.

The third expertise is in accounting and economic modeling. We may need to become experts in economic models that include run-to-failure, run-with-shutdown, run-with-PM or run-with-whatever scenarios. Right now the decision to run-to-failure is made in most organizations by default without data and without expert input from the Department of Equipment Health.

We have to be able to answer: given the facts of the value of the production, the impact on the customers of missed or late shipments and the costs of the additional deterioration what direction should we go? Should we run all out or stop for maintenance? We want to be at the table when "which is the better business decision" is discussed.

We have to be able to look at the life cycle cost per part made or gallon shipped. What would be the impact of increasing production with the existing equipment? If we do this what additional maintenance will be needed and when will they be needed?

The million dollar question: How would you start up this conversation in your company?

If that is the conversation we want to create, how do we do it? Why is it hard to change the behavior of an organization or an individual? It is hard to change a company culture (or even a families' culture). The reason it is difficult is that the fundamental conversations have not been understood and dealt with. These old stories and assumptions still run the show and any new cultural changes are merely smeared on top.

In order to permanently change the status of maintenance we have to begin by noticing the existing conversations. The old culture is anchored in place by structures, incentives, memory and custom. As such it takes no extra energy to keep the old culture in place. The next thing is to disassemble the structures that hold those conversations in place while at the same time creating new ones.

Right now the work is to see what conversations are going on in the company about maintenance. We have to look below the surface, turn over rocks and listen without getting mad. The next step is to see what reports, customs and incentives hold the old conversations in place. Once the field is cleared out, we are free to invent new conversations. The final step is to begin building new reports, incentives and customs to support these newer, healthier, more successful conversations.

Good Luck. -- Joel Levitt

Summary

Conversations are a very big part of everyone's life; they can play a huge impact. Whether they are personal conversations or private ones, they are just as powerful. Just as there are different kinds of conversation between people, in the same way there are different kinds of conversations in organizations. Either, they can be visible conversations that are conducted in front of everyone or private conversations that held behind the scenes. Conversations can help people achieve respect in front of others and also greatness. But, this all depends on the way we conduct ourselves. Though, Intelligence, talent, tenacity, discipline, genetics and contacts play a vital role in helping maintenance managers achieve greatness.

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