Courage, Humility, Kaizen

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I consider myself one of the luckiest people to have worked at Toyota. Everyone who works at Toyota receives invaluable training and on-the-job development, and I was no exception. What made me so lucky was the chance to work at three locations as well as being involved in high-profile projects. I had the opportunity to work at Toyota Motor Manufacturing Kentucky, the largest plant in North America; the North American corporate headquarters, and finally to be part of a new plant start-up team at Toyota Motor Manufacturing Texas. In addition, I worked on significant projects such as The Toyota Business Practice and The Toyota Way 2001. Most significant was the opportunity to be trained by Toyota's internal TPS group, Operations Management Development Division (OMDD). I am forever grateful for the opportunities afforded me while at Toyota and thank all the wonderful teachers and leaders who did their best to teach me The Toyota Way.

With a background in education, process improvement, and leadership coaching, I was hired in the late 1990s as a Development Coach at the Kentucky plant. My job was to teach and coach members of the leadership team on how to improve their "people" skills. I was assigned several managers to meet with and develop strategies that would allow them to work with their people more productively. My typical manager was one who was quite good at the technical aspects of the job but had a more difficult time developing the type of relationship that fostered mutual trust, a key component in the Toyota Production System (TPS).

The position of Development Coach at the Kentucky plant was a new position and one that was established by my first Sensei. She believed strongly that Mutual Trust was a key in the development of a TPS culture. She also believed that we could develop people in leadership positions who did not naturally possess the skills needed to build mutual trust. When assigned a new leader to coach, I chose to spend much of my time on the floor with these

leaders in order to understand their work conditions and the situations that they were in every day. My Sensei insisted on the Gemba (Japanese word meaning "where the work is done") approach, and I came to understand why. The Gemba approach allowed me to gain true insight into their situations, where they struggled and where they excelled. They were proud to show me their production lines and introduce me to the people they worked for. Yes, I said the people they worked for; it was common for Toyota leaders to consider the people on the teams they managed to be people they worked for and not people who worked for them. This was a new mind-set for me but I came to see it as an essential element in establishing a TPS culture.

These daily Gemba sessions with the assigned leaders became something that I anticipated every day. I hope I was able to add some value to those I was assigned to help, possibly through new insight and improved working relationships. But I am also sure that I learned much more from them than they learned from me. These Gemba sessions were the beginning of my journey to learn TPS from the people perspective as well as the technical manufacturing perspective. It was fascinating to see how TPS functioned. Not to be too dramatic, but it was like hearing a symphony with many components, parts, and people coming together at the right time to produce a quality product. When I work with clients today, I strive to help them develop this rhythm of work and unity of purpose.

I became more and more fascinated with TPS and had a strong desire to learn more about not just the production part of TPS, but how it evolved and how people functioned within the system. I shared this with my Sensei and she said, "Darril, you have the people part of the TPS equation. If you can combine that with the technical aspect, then you will have a powerful combination. Learn the principles behind the tools and how respect for people (customers, team members, society) drives the system." And so that became my objective: to understand this connection between people and process, the elements that make TPS one of the most studied but least understood work systems.

THE TOYOTA WAY 2001

In 2001, Toyota developed the internal document called *The Toyota Way 2001*. Toyota had grown very quickly around the world and struggled to convey the essence of what makes the company great to its newer

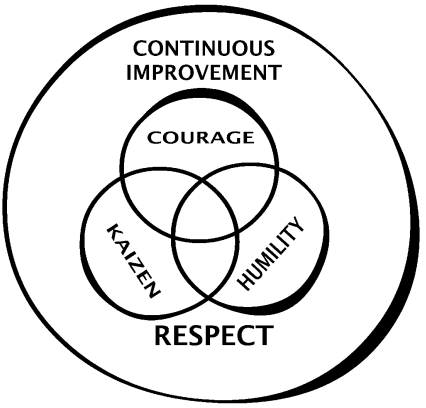
associates. When Toyota was a small company and centrally located in Japan, it was possible for senior leaders to teach team members in groups or one-on-one. The rapid growth made it impossible to disseminate the Toyota Way in the same fashion. Under the direction of then Toyota Motor Corporation President Fujio Cho, Toyota's Global Human Resources Division researched and developed *The Toyota Way 2001* as a way to communicate to global Toyota team members the "DNA" of Toyota. In the introduction, Mr. Cho states, "In this booklet we have identified and defined the company's fundamental DNA, which summarizes the unique and outstanding elements of our company culture and success. These are the managerial values and business methods that are known collectively as The Toyota Way."

In true Toyota form, the "Way" was condensed into a thirteen-page booklet. Someone once told me that they heard that the booklet took ten years to write. I told them I was not sure but it sounded right and added that it probably took one year to write one-thousand pages and nine years to condense it to thirteen pages!

Once published, Mr. Cho challenged each global region to disseminate the Toyota Way to the people at their locations. I was fortunate enough to have the responsibility to develop the program we would use in Kentucky to teach members of the management team. During the development process, I was able to meet and learn from the great leaders at Toyota Motor Manufacturing Kentucky.

Here I share the Honsha version of The Toyota Way that is based on the foundational Lean principles of Continuous Improvement and Respect. Within these two principles lies the heart: Courage, Humility, and Kaizen. Toyota uses slightly different words; here I have attempted to take the original concepts and find the deeper root.

An example is Genchi Genbutsu. This is a key element of The Toyota Way and is often quickly translated into "Go and See." As with many Japanese words, the quick translation fails to capture the essence of the word. At the Kentucky plant, many people used the phrase "Go and See" in place of Genchi Genbutsu but often the action was "Go and Watch" or "Go and Do," neither of which captured the essence of Genchi Genbutsu. When I asked one senior executive, Hiro Yoshiki, what Genchi Genbutsu meant to him, he explained the purpose [my paraphrase] as follows: "The most important reason to 'Go and See' is to learn, learn deeply about the situation and what is needed from you. The second reason is to teach by asking the questions that lead team members to correct answers. The third



reason is to be seen." This third reason did not sound very humble to me but I came to realize the meaning. By being seen, you are able to convey to everyone that the situation is important to you and that the people work-ing on the problem are important. You and others also build a mutual understanding of the situation and thus can arrive at solutions quickly. This was a key learning point for me. The fourth reason to go and see, said Hiro, is so you do not have to go and see anymore. This sounded very strange to me until he explained further. "We want to go and see but not the same problems again and again; we want to see new problems. Plus, if the time is taken to teach, then problems are avoided in the future because team members have a higher skill level."

If we are to learn, teach, show respect, and develop others, we must go to the part of our business where value is created for the customer. In manu-facturing, we call it the "Floor"; others call it the "front line." Whether it is manufacturing or service or a nonprofit agency, the message is still the same: Show your learning spirit, your humility by practicing Genchi Genbutsu!

COURAGE, HUMILITY, KAIZEN AT THE HEART

When we develop Courage and Humility we will then be able to practice Kaizen. These three elements work together and allow us to show respect for people and to develop a culture of Continuous Improvement. It was during my study of TPS with OMDD that Courage, Humility, and Kaizen came to life.

OMDD uses emersion as the preferred way to teach TPS. My first lesson was early one Monday morning at a parts supplier's plant location. With little more than an introduction, we started and I was taken to a work cell that made hinge parts for car seats. My Sensei told me, "Darril-san, this is your work area; please find 100 problems, I will return in 2 hours to see your list." This was all very new to me. I had spent many hours observing the well-oiled, highly efficient production line at Toyota. But this was obviously not Toyota. The production area was a mess; there was no standard work and no hint or any kind of order. In this case, it seems that identifying waste would be even easier. But it was not. I do not know if it was a lack of experience or a lack of confidence but I found it difficult to see any problems, let alone a hundred problems in two hours. How would I do that? Just getting organized as to how I would observe was difficult so I observed the team members and the machines from outside the cell, pacing around it like a timid puppy for two solid hours, looking for the elusive problems. At the end of the two hours, my Sensei returned to find that I had exactly two problems on my list. I was ninety-eight problems short of the goal!

He looked at me and then wiped his hands over his head and down to his face. He must have been thinking, "Oh my, what kind of idiot do I have here?" After he composed himself, he said, "Tell me what you see." So I described to him what the team members were doing but that I did not see any problems. I still struggled to identify the problems. My skill level was so low that one obvious item not on my list was a neatly hung mallet that was used to slam each part into one of the machines. This problem should have been obvious to anyone! At least they had it on a string so the team member did not have to reach very far for it; that should make it good, right? I was so naive.

At this point he was even more frustrated. "Darril-san, come with me," he said. In a private meeting room with a flipchart, he started to explain to me how to observe in order to deeply understand the work. He explained that at first that it is not my job to correct the work but to understand it, then to make improvements. I had long been an admirer of Dr. Stephen Covey's *The Seven Habits of Highly Effective People* and what he was explaining to me was Habit 5, "Seek First to Understand, Then to be Understood." From this perspective it really made sense to me. This was also a fundamental lesson the in The Toyota Way element of Humility. Humility insists that we understand so that we may develop better solutions. Taiichi Ohno said, "Observe the production floor without preconceptions and with a blank mind." This is what my Sensei was trying to teach me with actions, not just words.

He continued to teach me his approach, and he wrote the word "Muri" on the flipchart. He explained that Muri is part of the three Ms of waste: Muri, which translates as *overburden*; Mura, which translates as *unevenness*; and Muda, the most famous element, which translates as *waste* and has seven components. He explained that we must approach our deep understanding of the process first from the perspective of the people doing the work. We must look for Muri and eliminate it from the process. We must also send the correct message that our purpose is first to improve the work for the people doing the work. This will help us gain buy-in with the team when we go deeper into the improvement process. At this point we only looked at Muri. He asked me to list what I observed in the process that could be considered Muri. I recognized that using the mallet to hit each part, several hundred times per day, would be considered overburden, so that finally made it to my list. I could see walking inside the cell as overburden. My list had grown somewhat, but from my Sensei's perspective it was still incomplete. "Darril-san," he asked, "what is the best way to increase your understanding of the process and your ability to see the Muri?"

"I will observe more closely and with an eye for Muri," I replied.

"This would of course be helpful, but what can you do that would deepen your understanding more quickly?"

"Are you saying I should actually learn the job?"

"I am not saying, I am asking."

"Then I will need to learn the job in order to more deeply understand the process and to see the Muri more closely."

Now the lesson of Humility was even more profound. Not only was I learning new skills from a Lean/TPS perspective, but I also needed to

learn how to do the manufacturing job I was observing. I was not only a student of the Sensei, but now also a student of the team members I had been observing. I approached the team and asked if they would teach me their work process. They all smiled as if to say, this is going to be fun! "Of course," they said.

After donning the appropriate personal protective equipment, I started on the first machine in the process that connected the first two flat steel plates and began to turn them into seat hinges. This had looked so easy from the outside looking in. The team member teaching me the job had several laughs as I fumbled to keep up with the speed of the process. I would turn the raw material the wrong way, drop the parts, and was very slow and awkward. After a day on the job, I was able to pick up the process and do it with help from the team member assigned to me. I was not able to do it as quickly or with the quality of the team member, but with her help I understood the process much more deeply. Looking through the lens of Muri, I was able to add many problems to my list.

The next machine was the infamous "mallet hanging from a string machine" that I mentioned previously. The first action was to pick up a flat steel part, apply gooey lubricant with a brush to the section that would be moving against the previous piece; then put this into the machine by placing a hole in the part onto a small peg in the machine, and then smack the part with the mallet so it fit tightly even if it was already tight. Well at least it was standardized. This seemed very wrong but I wanted to learn from the worker perspective so I did as instructed. As

I did this process, I realized that smacking the part with the mallet was indeed overburden and caused a bit of pain at the end of the rotation—not to mention the possible damage to the part itself. I also realized that the reason the parts did not always fit snuggly on the small peg was that the peg had become worn over time and when the part was even slightly off center, the peg might not allow the part to fit correctly. The mallet was obviously a countermeasure to this problem but it was not the result of deep, 5-Why, problem solving. In this case, as in many others, the result of shallow problem solving is more burden on the worker. This was powerful learning for me.

One process called for the worker to add pins and grommets to a machine for processing. The hand motions used required reaching, handing off the parts from one hand to the other, and crossing arms to place the parts in the machine. This is also a burden on the worker…my list was growing.

Over the next couple of days I learned each process in this same way. When my Sensei came back and asked me what problems I had on my list, I showed him that the list had grown, and he seemed a bit more pleased. He asked me if I had not seen these same things before. Of course, I had seen the steps in the operation while I observed the process, but not through the eyes of Muri. I also discovered that I was hesitant to judge the steps in the process. When I observed the process and saw something questionable, like the mallet, I told myself, "There must be a perfectly good reason for doing that." When I told my Sensei about this rationalization of what I was seeing, he said, "When you observe the process, look for fact; don't be

concerned with whether there is a good reason for the action or not. If the action causes burden, then write it on your list as a problem. If the action is wasteful, then write it on your list as a problem. Maybe it will turn out to be a problem we work on now or one we don't work on for a while, but put it on the list anyway." This skill took the combination of both Humility and Courage—the humility to understand the process and the courage to identify the problems. It is not common practice to gladly raise problems to the surface in most work environments. I have observed that we are more likely to place a mallet on a string and smack a part than we are to actually recognize the problem and solve it at its root cause. I realized that I was very timid in my observation and that I must be more courageous in challenging myself to see more deeply.

Muri was an important lesson. Not only had I gained so much insight into the work itself, but also the process we were using to eventually make improvements. I was able to build strong relationships with the team members, thus setting us up for rapid Kaizen in the near future. This step of building the relationships with the team is not to be skipped if you are an "outsider" coming into the team. Learning from the perspective of Muri is a great way to foster relationships.

Several years later when I was beginning my consulting career, I had a client who made cast aluminum parts. It was a hot and dirty job, and I remember being a bit intimidated by not only the work, but also the seasoned veteran workforce. The plant was nearly sixty years old and many employees had been there for more than forty years.

On my first day at the plant, I immediately thought back to the lessons I had learned from my Sensei. Observe from the perspective of Muri: learn the process deeply. One of my first actions was to find the most grizzled veteran on the process I was assigned to and ask him if he would be willing to teach me the components of the position as if I were a new hire. He growled but agreed. I mustered as much humility and courage that I had and began to learn the job. Because of the inherent danger of the job, I was never allowed to do it alone but, with the veteran by my side, I eventually was able to accomplish most of the tasks. After that first week, the general manager of the plant sent a letter to the managing consultant stating that "We really liked working with Darril. He immediately developed an excellent rapport with the caster operators; in fact, he ran the casters for a bit (under the operator's supervision) to learn the job." I was obviously pleased that one of my first consulting jobs was going so well but I was shocked that the act of learning the job before attempting to help improve

the process was seen as so unusual. What other way would be effective? It was growing up at Toyota that taught me the power of small things such as learning the process, working at the Gemba, and building relationships. These small things are really the big things.

Having exposed me to the concept of Muri, my Sensei now moved on to Mura and Muda. There was a great example in this plant of how Mura or "unevenness" can lead to Muri. There was no set work pace or takt time established in the cell. The goal was seven pallets of parts on the dock by the end of the day on Friday. The practice was to work as fast as you could until you achieved the seven pallets and then take it easy for the rest of the week. This usually happened at some point on Friday morning, depending on how the machines ran. Quality was also and issue. I asked the area supervisor about the quality measures for this operation and he expressed that there were many issues with rejects and scrap. I asked the team about the safety record for the area, and they expressed that they had a new person in the cell because one person was out on medical leave and that they had many missed days on the team due to injuries. It does not take a rocket scientist to see the possible correlation between increased work speed and the quality and safety issues of the cell. We would not be able to attack all the issues during our stay but we could set up the process to minimize both Muri and Mura.

This fit well with my next learning: Muda, or the seven types of waste. In order to see waste, my Sensei helped me and the team begin standard work. We established the takt time and developed a pace setter, which for us was someone standing at the end of the cell with a stopwatch and not allowing the worker to put a part in the box until the appropriate time. Eventually, this method led to the team working at a steadier pace that was not prone to cause injury. It also helped us see the waste as it happened. We also helped establish standardized work for each of the processes in order to more closely match the cycle time with the takt time. Once we were working with a standard, my Sensei and I returned to the training to discuss Muda. I knew the seven types of waste but had not really been trained to use them in any meaningful way. He explained one of the wastes and asked me for examples from the process. Because I had spent so much time learning the process, it was much easier to develop examples. After I exhausted examples from memory, we walked out to the floor and he asked me to find more examples. I think he was testing me to see how deeply I understood the process by asking me to first work from memory. The first waste we focused on was waiting. I was able to see people waiting

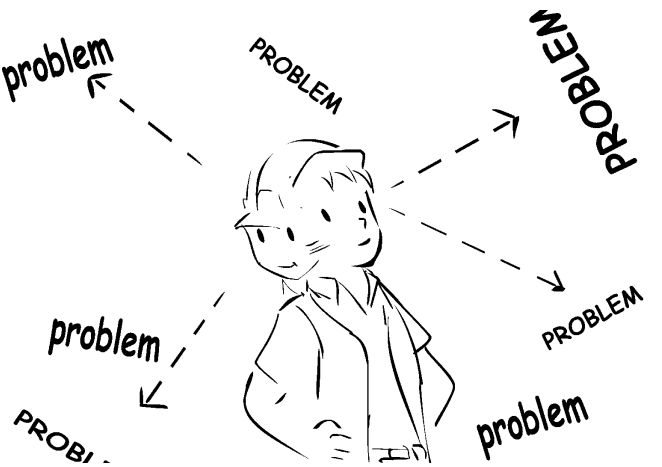
on the machine to finish cycling before they could work, or waiting to put the part into the box at the end of the cell. Before we established standard work in the cell, there was lots of activity; it looked very busy all the time, except for Friday afternoon. Was all the work actually adding value? It was hard to tell before the standardized work. Taiichi Ohno once said, "Wasteful action is not work." This was a great example of just that. In a sense, the team was saving up all the wait time in the process until Friday. By developing the takt time and standardized work, I was able to see the waste as it occurred and not have to wait myself until Friday to see it.

Before we moved on to the other types of waste, my Sensei made a point about the person standing in front of the machine. He explained that this waiting is one of the worst types of waiting. He said, "When we allow a human being to wait for a machine and just stand there, what we are saying is that the machine and the human are of equal value or maybe even the machine is more valuable since the human is waiting for it. Never allow this to happen. It does not show respect for people!" Today, when I am with a client and touring a production area, I still see this and am quick to challenge the leadership to develop ways to engage the person in other work while the machine is working. It is better for the machine to wait on the person than for the person to wait on the machine.

We rotated between the meeting room and the floor with each of the other six forms of waste and, each time the list of problems grew until eventually there were more than 100! Before this experience I could only see with the eyes I had developed over my lifetime—eyes that were trained, by my upbringing and the places I had worked, to overlook problems. Now I was developing a lens with the knowledge of Muri, Mura, and Muda. It reminds me of the movie "The Sixth Sense," about a boy who had a special ability to see and communicate with people who were no longer living. This was his sixth sense. In the movie, the boy mumbled to his doctor, "I see dead people, they're everywhere." After learning to see the workplace through the lens of Muri, Mura, and Muda, I find myself mumbling, "I see waste, it's everywhere."

As illuminating as it was to begin the development of an "eye for waste," just seeing the problems and not solving them would itself be a waste.

It was this phase of my training that was even more challenging than the first. Now I actually had to work with the team to develop and implement improvements. Many of the people going through this program at the same time I was had much more experience on the floor and were also very good at fabricating in the maintenance workshop. They could



conceive of something that would help improve the process, like a gravity-fed chute for parts delivery for example, and then quickly produce the device after cutting and welding the metal.

The team and I had developed several ideas that we wanted to imple-ment but we needed help to fabricate the items. Usually you can work with the plant's maintenance department for help but in this plant the resources were scarce. I spoke with my Sensei about this problem, and he brought me a pair of scissors and some heavy yellow tape. He then pointed me to the stack of used cardboard in the corner. "Darril-san, be creative!" he said. Again, this was my opportunity to practice both Courage and Humility. The Courage to find another way and the Humility to be the guy using cardboard and tape while the others were welding and fabricating!

Soon the work cell resembled a police crime scene with all the yellow tape. We made a small box out of tape and cardboard to hold lubricant to improve the process of brushing lubricant on each part. We made parts chutes for one machine so we could load parts from outside the cell to the operator. This was the machine that required the operators to cross their hands and reach often to complete the process. We dropped the cardboard and tape chutes into the machine and placed them near the point that the parts would be loaded in order to complete the process. This, combined with new standardized work for this process, allowed us to reduce operator time from over thirty seconds to less than fifteen seconds with a higher degree of ergonomic safety.

Some interesting developments resulted from our use of cardboard and tape in our Kaizen efforts. After a few days of cutting and taping

and changing the designs several times and re-cutting and re-taping, my Sensei took me to one of the other cells where the students were fabricating metal and welding. He asked me if I saw anything different there as compared to my cell. Obviously there were lots of nicely constructed parts chutes and tables made from metal. It did not resemble a crime scene because there was no bright yellow tape. It did not have piles of failed attempts as seen in my cell with the ripped-up cardboard and peeled-away yellow tape. It was the failed attempts that my Sensei asked about further.

"Why do you think there are no failed attempts here?" he asked.

"I guess they got it right the first time," I responded.

"Maybe so, maybe so. I want you to think about this question and get back to me later."

I kept working that day but the question was on my mind. Had I failed that much more than the other students? Were they really that good? Or, had they invested so much time and effort in the construction of these beautiful works of metal and welding that they were reluctant to try something else if the results were not what they expected? I shared this with him later in the day and he responded, "I think you are correct. They did not adopt the true spirit of Kaizen. Humility says that we don't really know so we must understand and then try many things to see if we have the right solution. If we don't, we try again. That is the beauty of cardboard and tape; you are demonstrating that you are not quite sure and you want to be sure before you make it permanent. If I have invested so much in my idea and I have not trialed my idea quickly and inexpensively first, then I am reluctant to change my plan and will try to make it fit. I think they approached Kaizen with only Courage and not a good combination of Courage and Humility. You may think you failed more than they did but actually you were able to learn faster and make improvements faster. This is Kaizen."

The lessons were clear. If we want to build a culture of long-term, sustainable continuous improvement, then we must first develop the Courage to challenge our thinking, to expose problems, and to solve them. It is also vital that we combine our Courage with the Humility to deeply understand the current situation, including the needs of the customers. If we can combine these two principles, it is then that we can Kaizen and develop the culture of continuous improvement.

When we attempt to Kaizen with just Courage, we may find ourselves in a similar trap as my fellow students. Kaizen in that case may look like

a bully trying to prove that he is right. Kaizen with only Humility is too slow to act and is always looking for more and more understanding before action. It is the combination that makes Kaizen work.

TEACHING OTHERS

Several years later, I remember those lessons along with many others as I teach those outside of Toyota. Inside Toyota, we take many things for granted, not the least of which is the culture of continuous improvement that has been developed over the years. In Toyota, problems are readily exposed so they can be solved. Visual management is a key component in exposing problems as they occur. Tracking visuals such as Andon boards and production count boards are commonplace.

I have had the opportunity to work as a consultant in many non-manufacturing but still production-related businesses. One example, and you might be surprised, is a mortgage banking company that works to modify

mortgages. It is no secret that the US mortgage industry has been in financial upheaval for several years. The volume of requests for mortgage modifications far outpaced the capacity of banks to process them. In a sense, these were production facilitates with information coming in one side, and the product, an approval or denial, coming out the other. Activity takes place between the beginning and the end of the process, and in that way it is much like constructing an automobile. If this is true, then the same principles of Courage, Humility, and Kaizen should also apply.

Honsha was asked to assist this company in increasing their capacity as well as maintaining high quality. We began with one group so we could understand the current capacity as well as the work itself. With this in mind, one of the first questions I asked the management team of this area was a seemingly simple question: "Are you ahead or behind?" I was surprised to see the surprised looks on their faces.

"What do you mean?" they asked.

"Are you producing your product ahead of your demand, with your demand, or are you behind your demand?" I replied. Still they were confused.

"I guess we are behind because there is no end to the work," one said.

"Will you be able to catch up?" I asked.

"I don't know," one replied.

With this exchange I knew we had a lot of work to do. As we toured the workplace, there was a glaring lack of visual understanding of the current condition. Employees were simply doing what they do with little knowledge of how the company was performing. I talked with other members of management as well, and it seemed that no one had a clear understanding of their condition other than it was "bad!"

We worked closely with one particular manager and his group to develop clear measures of productivity. We dug deeply into the process, becoming humble students and learning the process almost as well as the people doing the work. Working closely with the manager and the team, we established pilot process improvement experiments that allowed us to understand and increase capacity, while maintaining high quality. We asked that the team visualize its production progress with simple whiteboards showing plan verses actual and the difference. This was a culture change for them, exposing problems, understanding capacity and if we are ahead or behind, and allowing anyone who walks by to see this information. The act of visualizing their status took a combination of Courage and Humility—the Courage to show current condition and the Humility to admit there was a problem. It was not unusual to walk around the

workplace and see production tracking but it was always just one number: what was produced, not what should have been produced and comparing the two. One without the other is meaningless.

This was made evident during one meeting with a group of managers at this same location. There was a crisis, and they had to develop a plan to process a large number of modifications in the next two weeks. A member of senior management gave a pep talk explaining the importance of get-ting this work done and how she knew they could do it, just like they had done it in the past. She encouraged them to try really hard and maintain a great attitude. It was much like a pregame speech that a high-school coach might give. It was very inspiring, and everyone left feeling great. I could only assume that there was additional strategy beyond "You can do it." I was not a regular attendee at this meeting so I did not know what to expect.

The next Monday we had a status meeting to see how we were progressing on the "crisis." The meeting consisted of the managers and the same member of senior management. The process went like this. The member of senior management asked each manager what the production was for that day. She then recorded the number on her sheet (their ability to get real-time data from the computer system was limited). After each number, the team would clap for the reporting team. I did not clap; I was not sure what to clap for. Were these good numbers? Were we ahead or behind plan? For someone with a Toyota background, it was very confusing. We

also discovered that the original goal was not static, that new requests were coming in each day, so not only did we have to eliminate the "crisis" number but we also had to outpace what was coming in with increased productivity.

After this meeting I asked to meet with the member of senior management. I asked her if the meeting had gone as planned and if she was confident that we would be able to make the goal? She assured me that all was well. I then asked what the plan was, how could we be sure that we could make the goal. As it turns out, there was no plan beyond the pep talk and hoping that we made it. This was very frustrating but I remember the patience my Sensei had shown me in the past. So I asked her what she might expect from each person in production. Her expectation was ten per day per person. So if we multiply this by the number in each group, can we consider that our plan? If there are seven in the group, then the expectation is seventy per day? She agreed, although this was not really a plan and not really a reflection of the reality of production. She had not spent much time on the floor and did not have a clear idea of actual productivity. She only had reports. Taiichi Ohno once said, "Data is, of course, important … but I place greatest emphasis on fact." Reading reports at your desk will give you the data. Only going to the floor will give you fact!

Regardless of this disconnect, I decided to use the numbers she supplied for the next step. I asked her if could facilitate the production meeting the next day and actually compare planned production to actual production. She agreed.

The next day I started the meeting with a flipchart with a grid of each group number, and a space for Plan, Actual, and Delta (the difference between the plan and actual) next to the name. I asked the first manager, "What was the production of the group today?"

"Seventeen"

I posted the number under "Actual" and I asked him, "How many people do you have in the group today?"

"Eight at work today," he said.

I multiplied eight by ten and placed eighty under "Plan" and sixty-three under "Delta". I smiled and thanked him. There was no clapping. This went on for the next seven managers and each time it was like the air was being sucked out of the room. In the previous meeting we were just looking at production and had no way to know if we were making progress against the goal. Now we were now dealing with reality, with fact, not just data. At the end it was clear that we would never reach our goal without a different strategy. This was a very humbling exercise and the point was well taken. We must be humble and accept the facts, and we must be courageous and solve the problems, through Kaizen, that arise from our new understanding.

It took several months but this team eventually developed and began to understand their work in a new way. The success was evident when one manager we had worked with in the pilot group was asked in a meeting with his senior manager about the possibility of adding a component to the current process. Once the request was made, he outlined the process for the senior manager on a flipchart and how much time each step took. He estimated how much time the new element would take and added it to the process time. He calculated the impact on productivity and then said, "We can do this new element but it will cost us; in the short run, X amount of production per day per team. Is this a price you are willing to pay?" The senior manager was a bit astonished at this display of facts and said, "No, not at this point but can you work on the Kaizen of the process so that we can add this element in the future and not risk production or quality?" His answer was, "Of course!"

I had witnessed him a couple of months before in a similar situation. He was asked about his team's production during a meeting, and he was immediately defensive. After complaining and making excuses, he gave in to the request and then complained about senior management to his people. We coached him on these points. He must have deep understanding of his team's capacity as well as the work process. Only then would he have the

information he needed to respond with facts, not with emotion and excuses. He obviously learned a great deal and was able to put it into practice.

Lean is simple as a concept, but practicing Lean is difficult. When we focus on the foundation of Courage, Humility, and Kaizen, we can begin to learn it deeply and make our practice more meaningful.