

Effective Personnel Management: An application of Perceptual Control Theory

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Effective Personnel Management: An application of Perceptual Control Theory (1989)

How I applied PCT to get results (2010)

These two articles complement each other.

THE PROBLEM

The observations and ideas in this chapter are based upon personal experiences I have had working within various organizations, either as a part of management, or as a consultant specializing in performance-oriented personnel management. My purpose in this chapter is to describe and illustrate several management techniques that I have derived from perceptual control theory. In contrast to stimulus-response psychology, perceptual control theory emphasizes internal goals and voluntary actions.

I have always found that organizations of quality dutifully articulate the importance of people to the success of the company. However, I have also noticed that this talk often resembles superstitious incantations, as if, for example, touting the value of team work in mere words were enough to bring it about. For instance, a company I worked with spent over one million dollars on team development training over a 4 year period. When people who attended were polled within two to three weeks of the experience, with rare exception, they responded very positively to the training. When polled four to five months later, they remembered the experience as having been fun and worthwhile, but nothing had really changed in the workplace, where it counted. They still did not meet goals on time and there were still just as many conflicts as there had been prior to training. This was a tragic waste of resources, particularly considering the fact that workers' jobs were at stake: companies need the maximum productivity out of every dollar they spend in order to compete.

Note: This article originally appeared as Chapter 24 in W.A. Hershberger (Ed.) (1989). *Volitional action: Conation and control*, Amsterdam: North-Holland. Reprinted by permission of the author.

Fortune Magazine published an article in its Nov. 10, 1986 issue describing a group meeting of 500 senior managers at GM. The chief financial officer addressed them. He stated that during the last six years GM had spent about \$40 billion dollars on the most modern plants and automated equipment in the world. To put that number in perspective, the article said, "... for \$40 billion dollars GM could have bought Toyota and Nissan outright."

Instead, in that six year period GM lost about seven percent of the market share. Most disturbing was the fact that the Nuumi plant in Fremont, California, a resurrected failure reborn through a joint venture with Japan, was running more productively than the modern GM plants. At Nuumi there had been no significant investment in automation. With Japanese managers in control of building the management culture, Nuumi was outperforming every other GM plant, as near as could be determined, solely on the basis of how it was managing and leading its people. It is interesting to note that the Japanese managers hired back 85% of the same people who were the "militant union failures" under GM management.

This and other similar stories point out that American managers, while they may do wonders with innovation, market strategies, and financial analysis, do not know how to manage people. In actual practice, the management of personnel is all too often mismanagement. And it is my experience that mismanagers are to be found virtually at all levels in all organizations. Typically, these individuals are unaware both of their own shortcomings and their missed opportunities to dramatically enhance the productivity of their people. It is as if they assume that their management position automatically confirms

their leadership ability or that the position confers that ability, *ex officio*, as it were, in much the same fashion that pregnancy is thought to prepare women for parenthood. Of course, neither assumption is warranted.

Some managers are simply ill prepared for leadership responsibilities. They understand little about what it takes to motivate employees to work for the organization's goals. And, consequently, their management "style" tends to be unproductive, or worse yet, counterproductive. This fact is firmly documented by the extensive research of Tom Peters and Robert Waterman, as presented in their best selling book, *In Search of Excellence* (1982). Peters and Waterman also identify some companies and managers who do manage personnel very effectively. They note that these more effective managers, *i.e.*, those getting superior results, tend to use positive rather than negative reinforcement (*i.e.*, the carrot rather than the stick) to motivate their people. But there is far more to motivation than the carrot and the stick; there are also important internal factors comprising what is sometimes called the will.

The idea of reinforcement as a motivator or conditioner of behavior is based on a Cartesian notion of stimulus-response determinism. Behavioristic theories of performance based upon this narrow notion of determinism imply that we are organisms who behave because stimuli in our environment cause us to behave. Psychologists have suggested that by studying these cause-effect relationships we can understand why people behave the way they do and even learn how to use certain stimuli to motivate or control people's behavior.

During the 18 years I served as a manager, I found that management techniques based on this principle were hit and miss. Sometimes they worked; often they did not. This puzzled and frustrated me. What was wrong? Could the experts who taught me management theory have been wrong about the proper methods for motivating and handling people? Had not stimulus-response psychologists experimentally demonstrated the "law of effect?" In the end, it seemed to me that any true theory of human motivation had to be able to explain why sometimes the law of effect works and sometimes it does not. Behavioristic psychology provided no answers.

THE SOLUTION

Eventually, I found a satisfactory answer in Perceptual Control Theory, as developed by William Powers in his book *Behavior: The Control of Perception* (1973). There are three important concepts in Powers' theory: (a) internal reference signals, in the form of goals, or wants, which specify intended perceptions, (b) internal and external feedback, comprising the individual's controlled (*i.e.*, actual) perceptual input, and (c) a hierarchical organization of such controlled perception. Perceptual control theory opened up new perspectives for me and answered many practical questions. I have come to accept Powers' ideas, not only because they make sense, but because I have found that they work. The purpose of this chapter is to share three personal examples of instances where Powers' perceptual control theory helped me (a) explain certain "unaccountable actions" of a person in the workplace (*i.e.*, where the carrot was not working), (b) understand and resolve an intractable personnel problem, and (c) develop a program of productive teamwork.

A psychology developed around the concept of volitional actions or purposive outcomes may seem tautological to most managers in organizations. They do not perceive anything new in the idea of setting goals to direct or control the outcome of behaviors. To them, goal setting is a fundamental idea commonplace in organizational guidance and performance. So is feedback. That is why they have so many meetings and reports.

What managers fail to understand is that setting goals for organizations through senior management oratory or written directives does not guarantee that people in the organization will internalize these goals and work for them. Nor does investment in modernized equipment or computer reporting systems provide the kind of feedback that really matters. Even high pay, promotion, and other incentives will not always work. Managers who believe otherwise simply do not understand how the human system functions, how goals can affect perceptions, or how goals and perceptions interact. When this process is understood, all behavior, even the most aberrant becomes understandable, and therefore more capable of being influenced.

When a Reward is Not a Reward

The concept underlying positive reinforcement is the idea of a reward. Psychologists and management development experts teach us that rewards are positive, pleasant stimuli that are supposed to motivate desired behaviors. However, as Powers posits on page 14 of his book, we cannot really say what is rewarding about a reward. We can guess that recognition, promotion, or money are rewards, and we can certainly find instances where these rewards and desired behaviors correlate, but we cannot define what makes them rewards.

I have seen many cases where such rewards or incentives did not motivate people, or motivated them in the opposite direction from what was desired. I remember Dan, the manager of a medium sized manufacturing facility in the Southwest. He was notified that the company had decided to close his facility within a year and transfer operations offshore.

Dan was a highly respected performer in his organization. He was offered an equivalent position in Oregon at another company facility. He turned it down. Management thought he was crazy. In the eight years Dan had been with the company he had always done what was asked of him. He had always gone where he was needed. He was a fast-tracker. Management offered him a promotion and a significant raise to take the transfer. He still turned it down. Neither praise, recognition, promotion, nor money could persuade Dan to move.

Frustrated with his decision, management began to turn a cold shoulder. Dan's job was disappearing and if he could not take what the company generously offered, perhaps it was time for him to move on. This is what he did, leaving the company by the year's end, a valuable resource lost to competition.

As foolish as it sounds, not once in the entire process did management seriously consider what Dan was trying to control or work for in this particular decision. Of course, what Dan was trying to control, reflected Dan's motivation, what Dan wanted. This want was not represented by a single unitary goal. Rather it was made up of many specific goals interrelating with each other at various levels of a perceptual hierarchy within Dan. A simple questioning of Dan would have revealed how this hierarchy was currently organized. Dan had made some significant changes in his personal goals over the years, changes which affected how he perceived himself, his company, his future, and therefore his decision.

A few years earlier Dan still held goals for building and pursuing a career. He felt he should take advantage of every opportunity and do everything management asked. Thus, Dan perceived opportunities to move as beneficial. This was a value judgment he made within his own perceptual system.

At the time of the company offer, Dan had demonstrated a high level of capability. He had proved himself and reached a pay scale that satisfied his life style and life goals. He did not want to prove himself further. The change in status of these several internal goals altered the way he perceived moving. Moving was no longer a goal connected to other goals he controlled for. Neither was more money.

What were Dan's goals? Questioning him would have shown that he was presently more concerned with the stability of his family, and the fact that his kids had found good schools and friends with whom they were involved. His kids were building lasting friendships. They were putting down roots. He wanted them to experience more stability. He wanted this for his wife and for himself as well. These statements represented new specifications (goals) for relationships between Dan, his kids, his wife and their social environment. Moving to a new site with new challenges, which once was perceived as a reward for his family and himself under one set of internal goals was now perceived as a penalty. The same stimulus produced a very different perception and response.

The point of this example is to show clearly that rewards are not in stimuli, which are merely things in the environment, but in the perception of the stimuli, which involves a particular person. How an employee chooses to perceive a "reward" and whether it satisfies his many goals will determine what choices he will make. Thus, managers trying to stimulate and positively reinforce good productive behavior with rewards will find many instances where their reinforcements will not work.

One Minute Manager, written by Ken Blanchard several years ago, advocates one minute of praise every time an employee does something right and a one minute reprimand every time an employee does something wrong. The constancy of this positive and negative reinforcement will, according to Blanchard, serve to extinguish undesirable behavior and anchor the proper behavior.

Ask yourself what effect such automatic expressions of praise would have if they came from a supervisor you perceived as selfish and manipulative.

Would you trust the praise and feel good about it? Most people I have polled respond with answers like: "I wouldn't trust the praise." "He's being phony." "He's insincere." "I can see right through him." "His praising would have no positive effect on me at all." Consider a series of reprimands coming from a similar manager. Again, most I have polled respond unfavorably. "I would perceive reprimands from this type person as highly ineffective." "I would resent them." "I wouldn't pay much heed considering the source." "I would be very angry and upset but not because I did anything wrong." In other words, these people are not reacting to the stimulus of praisings or reprimands but to their own perception of the person who is giving them.

Understand, I am not against giving praise or recognition for a job well done, but I am against pretending that such things "cause" or "motivate" behavior. Reinforcement is just a component in a far more elaborate system.

Resolving an Intractable Problem

Sue was a very bright and ambitious young woman who became a supervisor of a five-person group responsible for supporting equipment in the field. Sue had no previous supervisory experience, but in other ways had earned the right to her new position of responsibility. However, soon after taking over, Sue experienced employee problems. Her people were not performing the way she wanted. Absenteeism was on the rise and she had almost daily arguments with her people. She heard from others that her people were complaining about her autocratic behavior. She was also feeling stress from complaints and criticism reaching her from other managers about the performance of her department.

Not being a quitter, Sue took to having weekly meetings with her people. In these meetings she fed back to them the things they had done wrong. She had learned that good managers give feedback. She shared the complaints she was getting, and told them quite clearly that she did not intend to have her career go down the tubes because of their lack of performance. She not only defined the problems in the department for them; she analyzed the causes, and told them what they needed to do to make things better. In spite of the weekly meetings, things got worse. Finally, her new manager asked if I might talk with her, since his advice was not helping much.

What many consultants would do to help in this situation would be to evaluate Sue's problem for her, tell her what she was doing wrong, and suggest alternate ways of behaving which might produce better results. Perceptual control theory helps me understand the process by which behavior is created and leads me to a different approach. I also realize from experience that telling a person what they are doing wrong rarely guarantees that they will understand or do what is needed. So, instead of telling, I ask a lot of questions.

When I talked with Sue she told me that her people were the reason she had to behave so autocratically. They were a group of undereducated underachievers that really did not care about the performance standards she had set for the department. They were careless, slow to react to problems, made too many mistakes, did not follow through, and made her look bad. They deserved the way she treated them. It was the only way she could get their attention.

Although Sue thought her heavy handed behavior was being caused by her people, this was not so. Actually, her behavior was evidence that something she was trying to control was not under control. In a sense her behavior was only a symptom, evidence of thwarted intentions, or error signals, which if found, would prove to be the real engine behind her behavior. She was trying to control the performance of her people, and trying unsuccessfully. I needed to find out what goals Sue had in mind. If I tried to deal with her behavior directly I would probably be unsuccessful in helping Sue. Trying to get her to change her behavior directly is like trying to steer a horse by pushing on its hind end.

Using simple questions, I found that Sue perceived herself as a hard-driving perfectionist. She was not used to making mistakes or being criticized for them. She had achieved a Masters Degree cum laude. Sue could not allow herself to be in a position of mediocrity or failure. I asked her whether she thought her standards were too high to be applied to others working for her. She did not think they were. She thought they could be achieved with effort.

I asked her how she might get her employees to meet her standard of performance. For this she held no hope. She responded that within this particular group of employees, which she had inherited, not one of them had a college degree. To her this showed that they were not ambitious, smart, motivated, or

disciplined. I asked her when she held a meeting with them, how she perceived them. She said she hated to have meetings with them. She perceived her people as stupid, uncaring, and a threat to her career. She did not evaluate her own behavior, and did not see herself as being an ineffective supervisor. As she saw it, her responsibility as a supervisor was to tell her people what to do, and their responsibility was to follow her orders because she was better educated and the boss.

When I further questioned Sue about her goals, her answers were focused on her career. She wanted to shine. She wanted to earn the respect of her new boss and other managers, whose departments she supported. She wanted a superior performance review and a pay raise at the year's end. She had never had less than superior reviews in her career. She expected another promotion, perhaps to manager, within a year. I asked her if she had any goals pertaining to her people. She said she wanted only to keep them from destroying her plans and career.

Managers who want to lead a person beyond themselves, to truly help them develop, must start with a consideration of that person's goals and perceptions. Just as I was considering Sue's goals and perceptions, she would need to consider her people's goals and perceptions in order to understand and effectively supervise her people.

During the time I consulted with Sue, I talked with her people. I asked about their goals. All they wanted was to keep her off their backs. I asked if they wanted to do a good job. They responded that they did, but with Sue you either had to be perfect or nothing. One said, "It isn't worth trying." I asked if they could try to talk this out with her. They said she wouldn't listen to them. They weren't smart enough, they said, to have an opinion she would listen to. Each of them expressed it differently, but their goals were not for working hard or performing well, but for avoiding Sue's criticism and badmouthing. They did not see how working hard would change any of Sue's behavior, but they did think that if they complained enough, someone might get the message and transfer Sue. So they complained a lot amongst themselves and to others.

I also talked with the previous supervisor of this group. He said that the people were not superstars, but neither were they losers. In the past they had done a creditable job.

It was apparent that Sue's people might very well be able to perform satisfactorily, but that, for the moment, Sue's goals and her people's goals were at cross-purpose. That is, although both Sue and her people were interested in doing a good job, her people were even more interested in keeping Sue off their backs, and this they could achieve only by doing a poor job and blaming it on Sue, or so it seemed to them. The group's poor performance, in turn, threatened Sue's reputation which was under high-priority control. She was trying to defend her reputation as well as encourage performance by scolding her people and imputing blame. This only antagonized her people and, in turn, exacerbated the threat. Sue was hung up in a vicious cycle; she was being too defensive for her own good. Sue had to discover that her best defense, ironically, was less defense.

From a perceptual control theory perspective, the problem was perfectly understandable, and the solution obvious. Sue had to discover for herself that her people were actually interested in doing a good job, despite their currently poor performance, and would possibly do relatively well for her if only they found her less aversive. Sue had to stop wanting to perceive (and wanting others to perceive) her people as her adversaries; that is, as "stupid, uneducated, and lazy incompetents."

I asked Sue if perceiving her people as stupid and uncaring was helping her deal with them and bring them along. She said that was the way they were. She didn't make them that way. I asked again, if, in addition to the way she perceived them currently, she might be able to perceive them as overwhelmed with her new standards and aggressiveness in wanting higher levels of performance. "Is it possible that they might be intimidated and a bit scared of failing, or incurring further criticism from you?" This had not occurred to her. She said she might be able to perceive them that way. I asked whether, she would possibly conduct herself differently in the next meeting if she chose to perceive them as more overwhelmed and scared than stupid and unmotivated. She thought for awhile and then said yes, she would handle the meeting differently. I asked her what she would do. She described a different softer approach to presenting the problems of the week and then talked about asking them for some of their ideas so she could put them more at ease. I was helping Sue visualize new behavior based on new perceptions possible for her.

At my suggestion, Sue tried the “softer” approach in her dealings with her people, and as she did so, her people’s “latent” desire to perform well began to manifest itself. This process, once started, was self-perpetuating. When Sue discovered that she could improve her people’s productivity and attitude by being less defensive, she became more tolerant both of herself and her people. Accordingly, she became a more flexible and effective supervisor. It took several meetings with her over a period of a few months before she resolved her difficulties with her people to the point where they began to meet her performance expectations. There were setbacks, and unfortunately she did lose a person, who did not have the patience or faith that positive change was taking place. A few weeks into our sessions together, Sue began to see each of her people as having significant contributions to make. When she lost one, she was devastated. She even talked of resigning. She had made some mistakes. There are always consequences from mistakes. But, Sue was learning to be a manager.

It is beyond the scope of this chapter to share with the reader the details of the several discussions I had with Sue. My intention has been to show that in managing people effectively one must start with an understanding of the process that drives them internally, and then help them resolve conflicts, competing priorities, or other difficulties within that process.

Teamwork

Much is written today about teamwork, and companies are investing unparalleled dollars in team development training in hopes of getting the kind of high performance out of their workgroups that they need. However, much of this training brings only a temporary *esprit de corps*. Rarely does it translate into lasting results. As I mentioned above, I once worked for a company which spent over one million dollars on team development training over a four year period, all to no avail. Although traditional approaches have failed to develop effective teamwork, perceptual control theory has helped me to develop teams that actually work.

A team is a group of individuals that share a common goal. This goal is the team’s focal point. Many different types of goals could qualify as a focal point. It could be: better customer service, better performance to schedule, better production efficiency, better quality. It is the characteristics of the focal point that are critical. A focal point goal to be used for team development must have 3 characteristics:

- (a) It must be very specific and capable of being measured.
- (b) Each group member must internalize the goal; achieving the goal must become a mission for each member.
- (c) The goal must be such that the team cannot achieve it without a contribution from every member who makes up the team. This interdependency ties the individuals together into a team.

Once a team has accepted a focal point goal, several things must be done. First, the goal must be talked about daily, to keep it firmly defined as a priority against other competing priorities in each person’s mind. Second, the teams’ performance must be reviewed regularly and this information must be shared with all the team members. This feedback has to come often enough to allow for control. Formal reports usually are not fast enough, or they are so voluminous that nobody can read them all and put the feedback in focus to create an action plan. Therefore, part of the process is a daily meeting, a short stand-up meeting, which reviews how the team did yesterday compared to yesterday’s goal, and what they have to do to make today a success. Obstacles and problems that might prevent today from being a success are identified by the team members. Actions required (AR’s) are assigned to specific people on the team, who then own the responsibility to resolve the action and report back the next day.

This feedback not only tells everyone on the team how they are doing, but instills responsibility and accountability between them. They learn to make commitments and to keep commitments to each other. The more of this they do, the more trust and confidence they build as a team. The frequency must be daily, at least in the beginning.

Third, effective team leaders realize that individual team members have their own strengths and weaknesses. They have their own personal struggles; they have to resolve both to fulfill the requirements of their jobs and to fulfill their responsibilities to the team. Each member of the team will need one on one time with the team leader. This time is spent helping people come to terms with their own internal problems and conflicts as they relate to the goals of the job. The same technique I used with Sue is employed.

Those on the team who are not comfortable with this focus and accountability must be taught the difference between a reason and an excuse. Excuses are facts which a person uses to absolve themselves

of responsibility to perform. "Joe didn't do his thing so that's why I didn't get my part done." Reasons are those same facts being used to create and recreate action plans that succeed and meet goals in spite of problems or obstacles. "Joe didn't do his thing, and when I realized this, I worked two hours overtime, so that I could complete my AR (action required) for the morning meeting." This is the ultimate in responsibility to self and support of another team player. It is what we strive for in every team development situation.

An example of effective Teamwork

To illustrate the process I will describe a teamwork program that I developed in a manufacturing group which was having difficulty meeting production schedules. Literally every order in production was behind schedule. Constantly changing priorities and hot lists (very important priorities to get done immediately) prevailed as the only mode of getting things done.

The manufacturing manager and I picked a focal point goal called "performance to schedule." We established a production schedule and our focal point goal was to reach 95% of the schedule on time. This performance was to be measured on both a line item basis and a volume basis so that production could not push easy parts to get the volume and neglect small but difficult orders and still look good. It was going to take a lot of teamwork to control all the variables that impinged on this goal.

The manufacturing manager and I conducted a series of meetings with not only the members who would make up the immediate performance teams, but also with all supporting people, whom the teams might need occasionally to do things that were in support of the goal. The importance of the program was explained. The management commitment was explained. The potential benefits of working in this new way were explained: the people themselves would be empowered to remove obstacles that kept them from doing their best. Everything in the kickoff meetings was oriented to selling the participants, getting them to buy in, creating a sense of mission.

We encouraged opinion and feedback. Most did not believe the goal could be achieved because management was always changing priorities and probably would not support the program long enough for change to take place. This was an important insight into their individual perceptions. If they believed

they would fail before they started, they could not be expected to seriously try to succeed.

We re-emphasized the management commitment. We held another larger meeting where the top manager addressed the group to affirm the commitment. We went back and conducted one-on-one sessions with all the players. If they felt they could not commit fully, we would let them off and replace them with someone else. This choice turned control over to them. All but one committed to the program.

To make a long story short, the program was a success. The results are reflected in the top line of Table 1 [see next page] which summarizes the average productivity of the teams relative to the focal point goal of 95% of schedule. The teams actually achieved 98%. Table 1 also summarizes the teams' performance relative to other focal point goals and their byproducts. As can be seen from an examination of the figures in the right hand column of Table 1, the value of this teamwork, expressed in dollars, was substantial.

CONCLUDING REMARKS

William Powers' Perceptual Control Theory has re-directed my understanding of people and has helped me make significant positive impacts on managerial careers and on operational performance. However, let me observe that there is no magic in this new volitional psychology. The challenge of productive personnel management is essentially the age old challenge of the human condition: finding the means to control what we want without infringing upon the rights and abilities of others to do the same. Failures to meet this challenge result in costly conflict. Success, on the other hand can yield profits that are equally substantial.

REFERENCES

- Blanchard, K., & Johnson, S. (1982). *One minute manager*. New York: First Morrow edition.
- Fisher, A. (1986). G.M. is tougher than you think. *Fortune Magazine*, (Nov. 10) 56-64.
- Peters, T. J., & Waterman R. H. Jr. (1982). *In search of excellence*. New York: Harper & Row.
- Powers, W. (1973). *Behavior: The control of perception*. Chicago: Aldine.

Table 1. Effectiveness of the Teamwork Program Based Upon Perceptual Control Theory Shown as a Before Versus After Comparison

Performance to schedule: A measure of control over a manufacturing line's ability to meet its first commitment date given for delivery of an item to a customer.

Vol. % to F.G.: Percent of volume shipped relative to finished goods. Many manufacturing lines produce product to a forecast of volume sales. If they don't put finished product into F.G. inventory, both customer service and sales suffer.

Overtime: Usually expressed as a percent of the total direct labor hours worked. Overtime should average less than one percent in an ideally running line. Overtime is useful to take care of temporary overloads. When overtime becomes regular and excessive, it costs more (paid at time and a half) and it leads to fatigue, which shows itself in more mistakes and higher absenteeism.

Days of inv.: Inventory control is often measured in days of inventory carried. Typical carrying costs of inventory in a company can equal 30% a year of the average inventory balance. Thus, in addition to liquidating 2.1 million dollars into cash, ongoing sales of 600,000 dollars were also realized.

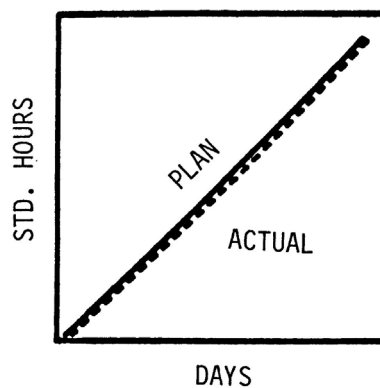
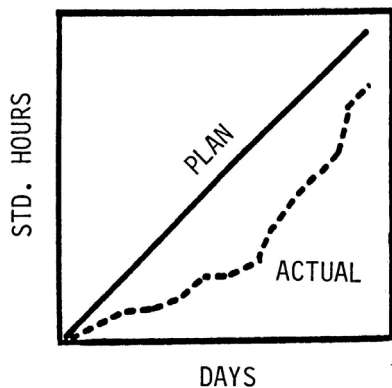
Mtl. shorts: Material shortages in production cause delays and missed schedules. Both are costly. When material inventory is high, logic would imply that shortages would be low. Usually this is fallacious because it is the control over inventory and getting the right parts to the line on time that are the issue. When a team learns how to control, both numbers come down.

Quality: Dpu means defects per unit. Note the significant improvement.

Linearity: Measures the evenness of production. Ideally, a manufacturing line puts out 1/20th of its work each work day. Linearity measures line control, but its effect shows up in higher productivity and especially higher quality.

COMPARISON OF PERFORMANCE

	BEFORE PROGRAM	AFTER PROGRAM	BENEFITS
PERFORMANCE TO SCHEDULE	23%	98%	customer satisfaction
VOL. % TO F.G.	82%	101%	customer satisfaction more sales
OVERTIME	12%	3%	\$17,000 / mo. saved
DAYS OF INV.	75 days	52 days	\$2,100,000 reduction
MTL. SHORTS	4%	1,5%	productivity plus 21%
QUALITY	1.26 dpu	0.25 dpu	
LINEARITY	avg - 7.0 days	avg ± .1 day	



"CONFLICTS HAVE BEEN REDUCED ... CREDIBILITY AND TRUST HAVE BEEN IMPROVED SUBSTANTIALLY"
the plant manager