Ongoing Discussion "Thought Piece"

By What Method? – A Reflection on Approaches to Leadership

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"A goal without a method is nonsense." W. Edwards Deming, *The New Economics* [(1)] p. 122

"Leadership is not merely to find and record failures of men, but to remove the causes of failure: to help people to do a better job with less effort." W. Edwards Deming, *Out of the Crisis*, [(2)] p. 248

Introduction

This paper intends to start a discussion on the approaches applied to leadership in organizations, specifically around obligations of leaders to define methods. It starts with some context, including a brief summary of Management by Objectives, including highlights of criticisms provided by Deming and others. Next, an alternative management method provided by the Toyota Production System is summarized. This is followed by discussion and analysis of potential limitations, as well as considerations for adaptation of the alternative approach to new environments.

Context Summary

I first heard Dr. Deming ask the question, "By what method?" in the summer of 1984. The context of the question was a discussion of the use of goals in organizations. My personal frame of reference at the time was strongly influenced by the fact that I had just graduated in the Spring of 1984 with a management degree, where I had learned a wide range of the prevailing approaches to business management. One of those approaches was introduced by Peter Drucker as "Management by Objectives" in his 1954 book *The Practice of Management* [(3)]. By the early 1980's, this approach had achieved near universal adoption among business leaders in the USA,

and was followed without question. Deming's question, "by what method?" was a direct challenge to this conceptual hegemony.

My initial reaction was surprise combined with curiosity. Up to that point, to my mind the concept of Management by Objectives (M.B.O.) seemed obviously correct. I had not yet thought through the implications, or realized the unintended consequences inherent in the approach. This thought piece will be an exploration of the alternatives, with specific analysis of the approach pioneered by Toyota known as the Toyota Production System, along with potential criteria to be applied in selecting methods of leadership.

As most readers will already be aware, the key ideas of M.B.O. include that management's job is to start by developing an understanding of the organization's objectives. Next the manager distills these into specific objectives to be assigned to individual workers, and accomplished typically by the end of the current year. After the assignments, the manager monitors the outcomes during the course of the year, and at the end of the planning period provides a judgement based on the degree to which the workers attain the assigned objectives. This is then followed by the distribution of bonuses or other awards linked to the judgement.

So what is wrong with the approach? Upon reflection, and with theory to guide us, numerous issues are apparent. A good frame of reference for highlighting these issues is Deming's System of Profound Knowledge. Breaking the organizations overall objectives into independent sub-objectives assigned to individuals does not take into account the concept of a system. Such an approach can only lead to sub-optimization, as there is no consideration of the effects on the system outcome of interactions between actions taken by individuals. When the individuals receiving the objectives lead departments, the effect can be especially egregious, and lead to non-

achievement of organizational objectives due to departments and divisions working to achieve their own goals (at cross purposes to each other). In addition to the waste to the organization as measured by the annual numbers, there can be even greater losses when considering the effects on the psychology of the people working in the organization. The competition between colleagues often leads to a corrosive organizational culture, with a win-lose mentality among co-workers. Focus on specific objectives often causes workers to neglect attention to areas of the business not covered by the annual objectives; this can lead to a range of problems, from minor slippage in non-focus areas, to major losses, to unethical behavior. Lastly, working to meet objectives specified by the boss invariably leads to reduced intrinsic motivation.

While these ideas were new to me in 1984, I readily came to accept them. It turns out many of these issues are also beginning to be understood, at least partially, by current purveyors of the prevailing style of management. An example of this revised thinking can be seen in a recent Harvard Business School white paper titled "*Goals Gone Wild: The Systematic Side Effects of Over-Prescribing Goal Setting*" [(4)]**.** The authors include a warning for those considering the use of goals: "Goals may cause systematic problems in organizations due to narrowed focus, unethical behavior, increased risk taking, decreased cooperation, and decreased intrinsic motivation. Use care when applying goals in your organization." While such problems are highlighted by the authors, they suggest the problems may be fixed with adjustments. These suggested adjustments include avoiding: a) goals that are too narrow, b) too many goals, c) goals with too short a time horizon, and d) goals that are too challenging. While this is progress, it seems that the concept of focusing on the method rather than the result has not yet become mainstream.

An example of an approach that does appreciate the power of method is the Toyota Production System (TPS). This approach has been studied, written about, and emulated for over thirty years, during which

time the approach has continued to evolve. Thus, there are currently many views of what the approach entails. To support later discussion, I will provide views based on my experience at Toyota and from my favorite references, and suggest a working definition of TPS.

Internal training for staff at Toyota stress two essential ideas as the core of their operating system, the concept of continual improvement, and respect for people. These are the foundations of the approach.

There are also several principles at work in Toyota, which guide the development and application of methods to be applied to leadership and management. These were summarized well by Liker in *The Toyota Way* [(5)] in 2004, organized in four categories as follows:

Problem Solving

- Learn continuously through small cycles of improvement
- Go see for yourself to thoroughly understand issues
- Make decisions regarding adjustments carefully with facts; implement rapidly

People and Partners

- Grow leaders who live the philosophy
- Respect, develop, and challenge your people
- Respect, challenge, and help your suppliers

Process

- Create process flow to surface problems
- Use pull systems to avoid overproduction
- Level out the workload
- Stop when there is a quality problem
- Standardize tasks for continuous improvement
- Use visual controls so no problems are hidden
- Use reliable technology

Philosophy

- Make strategic decisions based on long-term philosophy

These principles, applied consistently over time, have led to some rules that are practiced within TPS.

These rules have been described by Spear and Bowen in their article *Decoding the DNA of the Toyota Production System* [6], along with a set of ideals to be pursued. The rules are summarized here:

Rule 1: How People Work – All work is highly specified as to content, sequence, timing, and outcome.

Rule 2: How People Connect – Every connection must be standardized and direct, unambiguously specifying the people involved, the form and quantity of the goods and services to be provided, the way requests are made by customers, and the expected time in which the requests will be met.

Rule 3: How the Production Line is Constructed – Every product or service is delivered by flowing along a simple, specified path, which will not change unless the production line is explicitly redesigned.

Rule 4: How to Improve – Any improvement to production activities, to connections between workers or machines, or to pathways must be made in accordance with the scientific method, under the guidance of a teacher, and at the lowest possible organizational level.

As previously mentioned, one of the core ideas of TPS is to strive for continual improvement. To understand which changes will result in improvement, it is necessary to understand the overall aim of the organization. With this context, Toyota have defined a set of ideals that are incorporated in the overall aim of the organization. These have also been identified in the Spear and Bowen article; for Toyota the ideal Production System outputs will meet all the following criteria:

Ideals - All output shall be:

- Defect free
- Delivered one request at a time (batch size of one)
- Supplied on demand in the version requested
- Delivered immediately
- Produced without wasting any materials, labor, energy, or other resources
- Produced in a work environment that is safe physically, emotionally, and professionally for every employee

From the above principles, rules, and ideals, an entire body of TPS tools and methods have been developed. The typical list of such tools and methods includes: Just In Time inventory, Standardized Work, Visual Management, Value Stream Mapping, 5S, Production Preparation Process (3P), Takt time,

Andon, Jidoka, Heijunka, Yokoten, Kamishibai, and Hoshin Kanri. These methods have been extensively studied and written about elsewhere, so I will not describe any in this paper. As they are simply the manifestations of application of the above principles and rules, the methods are not required for a working definition of the Toyota Production System. A simple working definition of TPS is then a system defined by management to conform to the 14 principles and 4 rules in the context of the ideals specified above.

It is interesting to note that many companies have copied their favorite sub-set of the TPS tools, often without the benefit of understanding the principles and theory at work. This typically yields limited benefit.

Discussion and Analysis

It can be seen that in contrast to the approach of MBO, wherein a manager provides a goal for worker attainment without providing the method attainment, within TPS the manager provides both a goal and a highly detailed method. It should be noted that goals are used liberally within the Toyota system, they are based on outcomes needed to meet current and future customer requests. When issues arise that get in the way of goal attainment, managers are expected to respond and provide the support needed to get back on track. This approach applies whether the application at hand is production of product or service, or project management, design, analysis, or even creative work.

It is quite interesting to note that the mindset required of leaders and managers to practice the TPS approach is nearly 180 degrees from that associated with MBO. With MBO, managers review the environment, determine needs of the organization, translate these into goals, and then flow down goals to workers. Workers are on their own to determine their methods. With TPS, a similar environmental review is completed and organizational needs are identified, along with organizational goals. The next step however requires the managers to very specifically define the methods to be applied in the work of

transforming resources into delivery of product or service, and they are responsible for ensuring that the workers are achieving the results needed.

The change in thinking required among traditional leaders associated with accepting responsibility for providing the methods for achievement of objectives is quite profound. Even when managers and leaders wish to adopt an approach similar to Toyota, they may only achieve a partial conversion. It has been my observation that when executives initially attempt to provide a method rather than applying MBO, even if they fully buy into the concept, the typical approach is to define only a high level method. This is then followed by prescription of some metrics to track compliance with implementation of the high level method (often associated with deployment of a software product). Immediately after that they begin tracking the results metrics of interest. It appears that two underlying beliefs are working in such cases. First is the belief that only the outline of the high level method is needed, local details of implementation will be figured out by the next level of management, or the people who are doing the work. The second is that the executive has no direct responsibility to assure success, rather they are responsible to hold those under them to be "accountable" to achieve that success. To what degree is this correct thinking? To what degree is this abdication of management responsibility? Are there situations where mid-level executives should be fully (independently) responsible? If not, does this then mean that emergent solutions, organically developed solutions, are wrong? What role do emergent solutions to work design have to play?

To consider answers to the above questions, it may be helpful to review a model of the continuum of management styles. The following model has four styles, which exist along a continuum of employee involvement in decision making. At the most directive, there is the style called "Tell". In this style, the leader simply tells her staff what to do. Next along the continuum is "Sell", whereby the leader makes a good case for why the decision about to be imposed is good for everyone involved. Further along the continuum is "Consult". In this case the leader gathers her team together, explains the situation and the

nature of the decision to be made, and seeks input from the team. After consultation, and taking on-board all the relevant data and information, the leader makes the best decision based on all inputs. At the far end of the continuum is the style "Co-create". In this case, the leader gathers her team, explains the situation and nature of the decision to be made, and further explains that the best knowledge and expertise for making the decision exists within the team. The leader then facilitates her team to develop a solution and make the decision regarding the next step or change. At the start of the facilitation in this style, the leader is open to all potential solutions.

Considering the above continuum, we see that the styles will differ in significant ways. Which one will be quickest? Which will take the most time? Which one will achieve the most buy-in and ownership among the team? Which one is "best"? Regarding this last question, the answer I believe is a clear "it depends". Different situations call for different approaches (e.g. if there is a 911 type of emergency, the "Tell" style is totally appropriate). Of course, it is also important to realize that leaders are not limited to applying only one style. It is quite possible to provide a "Tell" answer to the question of which principles and rules apply, as well as the specific outcomes needed (facts of life), followed immediately by a "Co-create" solution to the best approach and method to apply to the case at hand.

Done with respect for and sincere interest in the well-being of team members, it is my belief that leaders can both provide goals along with the methods for their achievement (which incorporate the ability to identify and respond to problems along the way) in a manner that delivers joy in work and win-win results for all stakeholders. I expect that there will be many interesting points of view regarding the range of applicability of a system similar to the Toyota Production System to design of work. I very much look forward to talking about the above with all participants in this week's Ongoing Discussion. Questions which may help prompt discussion include:

1. What degree of specificity do you consider optimal for defining the work of individuals in an enterprise?
2. What criteria should be used to judge optimal?

3. How should we define work, so we may agree on the domain over which to consider the first question?
4. What are the benefits of defining work clearly?
5. How many levels of interaction should be considered when designing work?
6. Who should have the responsibility to design work?
7. What exactly should be meant by design of work?
8. What are the key concepts one must apply to evaluate the relative merits of one method over another?
9. Should the context of this analysis be limited to measureable attributes of the firm?
10. What are the tenets of MBO?
11. Are there any conditions for which MBO is useful or appropriate?

Additionally, we might consider various lenses available through which to observe, and to come up with our own principles for continually improving the methods of work, based on Deming's System of Profound Knowledge. For each, questions are proposed that may serve as criteria for whether a change in method is an improvement:

System View – (ref. OOTC p. 4)

- Does the change in work method better achieve the aims of the enterprise?
- Does it benefit all members of the enterprise system?
- Does it entail any collateral damage?
- How about impacts beyond the enterprise (customers (although they are in the OOTC p4 model), community, government, ecology).
- Take into account system thinking (process view – result focus paradox, understanding system is perfectly designed to deliver the results that you are getting now).

Psychology / People View

- Contribute to development of your team?
- Nurture intrinsic motivation?
- Engage staffs brains in seeking to improve on behalf of the customer?

Knowledge View

- Does the method assist in highlighting issues that come up, so that improvement efforts can be effectively applied?

Variation / Stability View

- Does the method contribute to predictable, dependable delivery of the transformation inherent in the work?

- Of the delivery of the value added intended to be delivered?
- How do component interactions fit?
- What about stability of supporting work, do they allow for effective timing, planning of other supporting work (feeder line concept).

References

1 W. Edwards Deming (1993), *The New Economics for Industry, Government, Education*. Cambridge, MA: MIT Center for Advanced Engineering Study.

2 W. Edwards Deming (1984), *Out of the Crisis*, ISBN 9780262541

3 Peter Drucker (1954), *The Practice of Management*, ISBN 0-06-011095-3

4 L. Ordonez, M. Schweitzer, A. Galinsky, M. Bazerman (2009), *Goals Gone Wild: The Systematic Side Effects of Over-Prescribing Goal Setting*, Working Paper, www.hbs.edu/faculty/Publication%20Files/09-083.pdf

5 Jeffrey Liker (2004), *The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer*, ISBN 0-07-139231-9

6 Steven Spear, H. Kent Bowen (1999), *Decoding the DNA of the Toyota Production System*, Harvard Business Review, September 1999 issue

BIOGRAPHY

After earning his B.S. in Mechanical Engineering from Michigan State University, Mike Beck started his career in the auto industry, working for General Motors, initially at the Oldsmobile Division. His early roles were in new product development, reliability and test engineering, and included participation in a GM Fellowship, obtaining a Master of Management degree from Northwestern. After returning to GM, Mike met and worked with Dr. W. Edwards Deming, a consultant to the GM Powertrain Division. Mike was selected to become an internal consultant in quality and continuous improvement, spent one year in training with Dr. Deming, and transitioned from Engineering Management to a position co-leading the Powertrain Statistical Network from 1987 through 1992. Strongly influenced by Deming, Mike obtained a second master's degree during these years, an M.S. in Applied Statistics from Oakland University. In this period Mike developed deep expertise in continual improvement, quality, statistical methods and organizational transformation.

The next step in Mike's career led him to join Toyota, where he assisted in organizing the new Toyota Motor Manufacturing North America headquarters in Erlanger, KY. Experiences at Toyota led Mike to appreciate the power of simple, concrete, visual methods, based on clear principles, to align teams and deliver value for customers. After Toyota, Mike's career path included executive management positions in quality, operational excellence, manufacturing, and field operations at United Technologies Corporation and Terex. Starting in 2009, Mike provided consulting and leadership for applications of lean manufacturing, quality, engineering, and continuous improvement to a range of organizations, including the gaming industry, aerospace manufacturing, construction, and green energy.

In early 2014, Mike joined Joan Wellman and Associates, where he now serves as an engagement leader and consultant in application of the Toyota Production System (TPS) applied to health care. Mike is currently working to improve quality, safety, access and engagement through application of TPS at several hospital systems across the US.

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