

Natural Systems Principles, Systemic Leadership and the Deming Prize

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Summary

Businesses are facing unprecedented circumstances. Responding to these circumstances will require more than simply modifying existing practices. Whether the aim is to survive the current economic turmoil, strategically plan the future or to reduce our impact on the wider environment, the old ways of managing are clearly not up to the task. A continuing transformation is imperative.

This paper explores how, by combining the principles underpinning the Deming Application Prize with the emerging knowledge of Natural Systems Principles and our experiential learning of Systemic Leadership, we have a new formula for transformation. This continuous transformation is needed if our organisations, public, private and societal, are to survive and thrive in the future.

Introduction

Most organisations across the world have made at least one systematic attempt to improve their performance at some stage over the last 20 years, and we in PMI have been involved with a wide variety of them. Whilst most improvement programmes more than repay the costs of the investment in terms of problems solved, few achieve the full potential in transforming the way the organisation works day to day. It takes a particular mindset, robust theory and long-term sustained effort to realise the potential of a truly optimised and integrated organisation.

The organisations we work in are human systems, as are the change programmes we use to improve them. All Natural Systems share common characteristics, and we can apply these to human systems. We should, as we would with a Natural System, seek to understand cause and effect relationships, to nurture the inherent desire and capability for improvement, and to value the diversity and individuality that can flourish within standard operations.

The unique circumstances of 2009-2010 will not respond well to old formulae and conventional wisdom. The standbys of traditional leaders: target based management, motivating though financial bonuses, mergers and acquisitions, outsourcing etc, all have been shown to be flawed. It seems that the rules have changed. Society as a whole is questioning the way organisations make judgments, plans, forecasts and predictions. We therefore need a transformation in leadership practices – Systemic Leadership.

So is there anything we can rely on to assess and guide our efforts, when the old assumptions seem to have been undermined? Can we take advantage of decades of experience of the Deming Application Prize, a mature, well-used framework from the 'old' world in the new uncharted territory? Our premise is that the fundamental principles of the Deming Application Prize are enduring and enable us to guide our organisations through this turbulent time and beyond.

Organisational transformation requires different theories and much more persistence than project-by-project improvement. It is, at the same time, both demanding and rewarding. There is a growing realisation that transformation is needed on a much wider scale, if we are to contribute to a sustainable world economy and provide a fulfilling work environment for those involved.

If we draw upon the fundamentals of Natural Systems Principles and the principles of the Deming Application Prize we can nurture Systemic Leadership which is essential to organisational transformation.

Three Natural Systems Principles that inspire transformation

Natural Systems, in the broadest sense, extend across all domains from the universe itself, to the organisation of sub-atomic particles, the way the brain develops and ecological domains such as islands or forests.

The 20th Century saw unprecedented study of all Natural Systems, and as research technology became ever more sophisticated, it became apparent that in each case, the diversity of the natural world is generated by surprisingly simple means. Thus for instance, there are basic rules about natural selection in determining evolution, about how the individuality of an animal or plant grows from a very few apparently undifferentiated cells and how all the elements of the universe have been made and remade in stellar explosions.

Given the volume of fields to study, it is not surprising that most researchers have been concentrating on their specialist disciplines, with little awareness of similar underlying principles behind other discoveries.

One who has looked across the disciplines is Dr. Elaine Johnson of MBM Associates, Portland, Oregon USA¹. Her proposition is that the characteristics of a small number of key principles have a lot in common across the domains.

In summary, the three principles that underlie the natural creation of order and structure are:

Interdependence: Everything in nature is connected to everything else.

Self Organisation: Natural entities have the rules for creation inside themselves, they do not need to be instructed from outside.

Differentiation: Nature constantly generates newness without losing the previous identity.

¹ Contextual Teaching and Learning. Johnson E.B, (2001) Corwin Press. ISBN 978-076197865

These Three Principles of Natural Systems become relevant to management and leadership because they can help us understand, improve and lead human-made systems.

The Three Principles and human-made systems

We believe that a key reason why managers in traditional organisations find it so hard to achieve and sustain the improved results they seek, is that they are often ignorant of how these Natural System Principles are at work in their own organisation. As a consequence, leaders often intervene in a way which conflicts with the Natural Systems Principles, the organisation's essence. Their interventions may conflict with these fundamental characteristics and not only cause their efforts to fail, but also reduce the chances of future success. On the other hand, being conscious of these and working with them, makes the change easier, stimulating and building the momentum for improvement.

In this there are parallels with martial arts, where small, light people can prevail against much larger opponents by amplifying or diverting their moves rather than confronting them. Or consider the traditional carpenter who adapts his craft in response to the form or grain of the timber. Appreciating the need to work in harmony with Natural System Principles enables leaders to work with the essence rather than fight against it.

Systemic transformation

Transformation is organic, emerging, discontinuous change. A person, or an organisation, becomes different over time, and through a process that often seems surprising. The route to the next step is discovered through knowledge built by the repeated operation of the Plan Do Study Act (PDSA) cycle, and leads to a further step as the individual and the environment change.

In an organisation that is making good progress on this journey everyone understands their processes, their place in the system and is able to optimise and improve them in real time. At first glance the changes needed to achieve this can look like reasonably straightforward challenges of definition and discipline. Many have been tempted to design a long-term, step by step programme, and "drive" towards it. However, experiences of understanding the organisation, selecting priorities, building an improvement system and running the first few projects always leads to the realisation that there is much more to it than this. Not least of the challenges is that the systemic transformation is, by definition, highly contextual. It adapts to every aspect of the organisation, its size, maturity, culture, purpose and so on and is transferable across all circumstances, cultures and industries.

In summary, the systemic approach:

- Is the means by which an organisation can achieve long term prosperity by continually improving and repositioning itself in order to optimise itself as a system (effectiveness, efficiency, adaptability and agility).
- Ensures unprecedented levels of service, value, leadership and impact to the mutual benefit to the organisation, its customers and the wider environment.

- Extends beyond project-based improvement. It encompasses culture, thinking, behaviour and values which enable the organisation to remain of enduring value to the wider system and society.

What should you expect to see if you were engaged in such a transformation?

- The purpose of the enterprise is clear and focussed beyond current activity so as to adapt to changing conditions and customer needs.
- Business strategy is defined and deployed using the System of Profound Knowledge as the guiding philosophy.
- All key processes are owned by individuals and aligned to the aim of the business.
- Everyone in the business understands their own process(es):
 - How they fit into the organisation as a system;
 - They know how their processes are performing;
 - Can relate to their customer in terms of the Kano Model;
 - Understand how to monitor the performance of processes to ensure they are Capable (aiming at On Target with Minimum Variation);
 - Improve their process in real time, in the context of the discipline of standard operations.
- Management of everyday work and incremental improvement are seen as being part of the regular job.
- Teams work in cooperation on daily improvement.
- Problems are solved systematically and systemically. Rapid PDSA is the response to urgent problems; The Improvement Cycle is used at a larger scale.
- Everyone is expected to learn and is accountable for spreading their learning.



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Transformation emerges. The length of this list explains why most people initially discover further potential through improvement project work. Directly or indirectly they encounter many concepts and tools that are new, or seen in a new manner. They then come to see how much more potential there is for wide and deep application in all aspects of the organisation.

Systemic Leadership

Transformation works on a deep level of people's beliefs, philosophy, principles and aspirations about what is possible for the organisation and for themselves. As a result of these new prevailing beliefs, behaviours change:

- Leadership is seen more as a 'state', not just a 'status', and it is expected from, and modelled by everyone.
- Leaders consistently and intelligently manage by process, nurturing transformational /systemic leadership in everyone.

A good test of this is how we respond in the event of a problem. A systemic leader will always start with: "What are we trying to accomplish?" and will ask for a picture or a map of the process, and for data about its stability. They will resist the temptation to appear 'hero-like' with the solution.

It becomes clear, therefore, that this transformation is personal. The organisation can only transform as the people transform themselves, especially the leaders and "change agents".

- It challenges belief systems and values;
- It is very hard to describe in detail beforehand, and is constantly surprising;
- It is a continual process and must be led;
- It is in detail unique to each organisation and person.

A Systemic Leader therefore:

- Has a vision for an effective and enduring organisation;
- Optimizes the system to provide value for its customers, stakeholders and the wider environment;
- Works with the Natural Systems Principles;
- Appreciates that people and their intrinsic motivation are key to success;
- Sponsors and models strategic step change and improvement;
- Ensures that everyday processes work effectively and efficiently.

Testing progress - applying Deming Application Prize Principles

Our work in transformation is continual and we never actually get to a finish line. This is another parallel with Natural Systems, which are never finished: they continually adapt to the environment in real time to ensure they survive. Human beings have the power of prediction, so we can to

some extent anticipate the changing conditions and get our systems ready to cope or take advantage of this change.

Since 1950, the Japanese Union of Scientists and Engineers has organised the prestigious annual Deming Prize for Application. The Prize has been awarded to a select band of organisations whose leaders respect the demands it makes. The criteria have evolved over the years into an extremely demanding and detailed process for assessing the applicants for the Prize, but the guiding principles are relevant to any leaders who wish to test their own progress and be guided towards excellence.

The Prize is focussed on achieving outstanding results, with applicants having to demonstrate that these results have been achieved through the application of Deming's principles and methods. Equally, the implication is that the successful application of the principles underpins future performance, not just historic achievements.

Top managers have to demonstrate the application of the scientific method (PDSA):

- Effectiveness; that the approach achieved the objectives—they must demonstrate a cause and effect relationship between what they did and the improved results;
- Continuity; demonstrating that it has been applied over an extended period (years) and has become the everyday manner of working;
- Consistency; that it applies all across the organisation;
- Thoroughness; in-depth in every department involved.

The evidence given by the Chief Executives of the Deming Application Prize winners is that they have found the assessment process very difficult but well worthwhile. They see it as the basis for managing their business. Taking advantage of the decades of learning to keep the four criteria in mind at every review and planning session is invaluable. Such an approach enables you to be dispassionate about judging the progress that is being made, even though the effort to make it must be full of passion!

These CEOs have demonstrated many of the aspects of systemic leadership—the attributes we believe are necessary for the future.

Conclusion

Although you may achieve substantial results from applying the improvement methodology to problem-related projects, you will not achieve outstanding continual performance unless you engage in Systemic Transformation.

The process of transformation depends on the transformation of all involved but most especially, of leadership. Systemic leadership is most effective when working with an understanding of the Natural Systems Principles.

When the characteristics assessed in the Deming Application Prize are exhibited, the organisation is set on a course of sustainable excellence.

Integrating these themes enables us to apply a new approach to management – systemic leadership – and to optimise the organisation for the benefit of its customers, owners, staff, the environment and wider society.

Process Management International Ltd

Process Management International (PMI) celebrates its 25th anniversary in 2009. It is a consultancy and training organisation based upon the approach of Dr W Edwards Deming and now leads the application of transformation based upon Natural System Principles. PMI has worked around the world from its base in Coventry in the UK, and clients have included AP Moller Maersk, Rolls-Royce, Airbus, GlaxoSmithKline, BMW, Land Rover, International Paint and many other global companies as well as health, police and local government organisations.

Jan and Jane have addressed many conferences, including the Asian Network for Quality in Delhi, Taipei, Singapore, Seoul, Bangkok and Tokyo. PMI are partners with the Chartered Quality Institute of the UK, the world's oldest professional Quality association.