

Detailed Descriptions of the Developmental Stages or Action Logics of the Leadership Development Framework

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Presented at the W. Edwards Deming Research Institute, Eleventh Annual Research Seminar, Fordham University Graduate Business School, Lincoln Center, New York City

Feb 21st/ 22nd 2005

Abstract

The paper describes an on-going inquiry into the polarities and tensions between the processes of Managing and Leading – and how the tension can be leveraged as the basis for systemic intervention.

It explains how the most efficacious Leader/ Managers seem to possess heightened awareness of several specific sources of power – that can be picked-up at staging posts along Life's journey, and that this might explain why it is that - as an exemplary Learning organisation - Toyota continues to make significant cash when it's competitors struggle to make any at all.

Written from the perspective of a practicing executive coach, and as a retrospective on the work of W. Edwards Deming, the paper describes just what it is that a few extraordinary Manager /Leaders seem to possess that enables them to simultaneously Manage and Lead transformation – first of themselves and then of their organizations. It culminates in a comparison of “conventional” organisations, and “post-conventional” (Learning) organisations like Toyota in which Deming's influence continues to be profound – using 3 generic intervention modes, and 7 archetypal action-logics, each of which corresponds to an executive's developmental stage.

Leading, or Managing ?

In the middle of an organizational system in the 80's and early 90's, my job title was Manager, but I felt all too often that I should be Leading. It was a frustration, because at that time it seemed that whenever I took the lead to change something it would get me in trouble with someone – usually a higher-up. Then I discovered Deming. I had been sent on a part-time executive MBA by my organization, but I didn't discover him at Business School. Rather, it was through a member of my local community who had been sent by his company to a TQM seminar - he buttonholed me with “Julian, you're doing an MBA - tell me about Deming and Juran.” Whereupon I was forced to admit that I didn't know of either. Embarrassed that he knew something I didn't, I got hold of a copy of *Out of the Crisis* (5) – and read it – all night in fact, because once started I couldn't put it down.

The things that hit me about Deming's view of the world was that it was a complete and coherent theory of the organization – and one that patently worked – it was about people and process in equal measure – it reminded me that managing was as important as leading, something at that time that I was in denial about – most of all, it encouraged me that transformation was possible with appropriate leadership. I felt that here was someone actually urging me to lead. When I read the words “the job of a leader is to accomplish transformation of his organization” (6) I felt he was speaking to me.

In recent years the demand for leaders, rather than for managers, has grown considerably – and at times, it has even been a put-down to describe people in organizations as merely managers. Indeed organizations that were downsizing in the 90's were often famed for expunging managers and keeping only those individuals who can lead – those “movers & shakers” who can make things happen.

In 1995, C.K Prahalad was so keenly advocating the reinvention of our organizations that he referred to managers as merely caretakers and undertakers: “The process of reexamining and reinventing the company demands a.. capacity to think long term and, at the same time, create the financial and the organizational space for change through efficiencies. It is the appetite for this process of reexamining and reinventing that will separate the builders (leaders) from the caretakers and the undertakers (managers and cautious administrators)” (11)

Moving and shaking were apt words for my own style in the early 90's – as I saw things, I was prepared to challenge the caretakers and undertakers when others were too cowardly – I would be the one who put my head above the parapet. And, I did feel that I made some difference, but I also got myself fired. It was as a redundant executive that I turned to consultancy.

One of the very first pieces of work I was approached about was with the Body Shop. I was delighted to think I would be able to see first hand a brilliantly (even ethically) led organization. What I discovered was production workers and managers who were embarrassed at filling land-fill sites with product that was being needlessly manufactured. And one told me that the word “process” was banned from use by the company’s executives, another that executives frequently disrupted meetings by overloading them with new ideas. In the 90s it was popular to bemoan the dearth of leadership and real leaders in organizations, and yet here was an organization that showed distinct signs of being over-led, and under-managed.

At a British Deming Association seminar in 1994 Peter Scholtes gave me a wonderful insight. He proposed leadership itself to be a process or system. I went away and thought about this proposition at length, and eventually came to the conclusion that managing and leading are indeed two distinct processes/ systems, two separate ways of intervening - albeit with the same ultimate intent - namely to improve a section of one’s organization, even the whole organization, and maybe even transform it.

I realised that it was actually unhelpful to think of people in organizations as either managers or leaders - and that everyone, almost everyday, is engaged in both managing and leading. It was then I discovered the work of John Kotter who was helpfully confirming that “leadership and management are two distinctive and complementary systems of action “ and that “leadership complements management - it doesn’t replace it.” He also proposed that “strong managers produce predictability and order, but leaders create, communicate and implement visions of the future which enable companies to change themselves in a changing competitive marketplace” (10).

Gradually, I have come to see that everyone, arguably from the moment of birth, but certainly by the time speech is acquired and cognitive/ social processes begin, is interested in doing these two things:

- (a) making things (change) happen, and
- (b) maintaining a level of comfort based upon some aspects of life being ordered and stable/ predictable - as a base for being able to do (a) make things happen.

Both (a) and (b) are overlapping, yet separate processes. The first is Leading, the second is Managing. Albeit this particular definition of leadership is one that is better understood and used by individuals in the more “conventional” stages of developmental maturity.

Developing the POWER to intervene

Around this time “The New Economics”(6) appeared, and I was fascinated by the way that Deming described Leadership. He was saying that “a system cannot understand itself,” and that “ the transformation will require leaders.” He went on to say that “the first step is transformation of the individual,” which “comes from understanding the SoPK”. He also proposed that the individual’s power is derived from 3 sources : position, influence and knowledge - in other words : power over others, power with others, and power through expertise.

Just after the TNE was published, Nelson Mandela was inaugurated as president of the new South Africa, and as if in the zeitgeist, he was reported as urging people to use their personal power: “Our deepest fear is not that we are inadequate. Our deepest fear is that we are powerful beyond measure. It is our light, not our darkness, that most frightens us.”

Another book was published at this time, and this was the one that put it all together for me : Bill Torbert in “Personal & Organizational Transformations - the true challenge of continual quality improvement” (15) was suggesting that individuals acquire a succession of new worldviews as they develop throughout their lifetime, and that with each worldview they develop a particular type of power. As I read about each successive worldview - each a coherent self-contained way of making sense of the world - and then reflected autobiographically, I was able to recognise my own (sometimes painful) transitions.

I believe that, from his own life experience, Deming had an intuitive sense of these (sequential) transitions - and the coherent completeness of each one, and of course, the inherent limitations. He often referred for example to Euclidian geometry that in its own “flat-earth” world made perfect sense. I believe that when consulting he used his intuitive understanding of where people are at, to ask developmental questions - he asked shop floor workers what they took pride in - he asked executives what they were trying to accomplish - he also sometimes coerced people with ultimatums.

I believe that Deming would not have been surprised by Jim Collins’ research findings (1) in 2001 on the quantum difference that “post-conventionally” thinking leaders make.

Here is a table using Torbert's labels to summarize the essence of each worldview (stage):

	Stage	Action Logic	Main focus	Source of POWER	% of adult pop n = 4,510
POST-CONVENTIONAL	Alchemist	deep processes and inter-systemic evolution rule principles	interplay of awareness, thought, action, and effects; transforming self and others	SHAMANISTIC (through presence)	2.0
	Strategist	most valuable principles rule relativism	linking theory and principles with practice, dynamic systems interactions	INTEGRATIVE (consciously transformative)	4.9
	Individualist	relativism rules single system logic	self in relationship to system, and interaction with system	CONFRONTING used to deconstruct other's frames or world views	11.3
CONVENTIONAL	Achiever	system effectiveness rules craft logic	delivery of results, effectiveness, goals, success within system	COORDINATING (coordinating the previous 3 sources of power)	29.7
	Expert	craft logic rules norms	expertise, procedure and efficiency	LOGISTICAL e.g. knowledge-based or authoritative power	36.5
	Diplomat	norms rule needs	socially expected behavior, approval	DIPLOMATIC e.g. persuasive power, peer power	
	Opportunist	needs rule impulses	own immediate needs, opportunities, self-protection	COERCIVE (unilaterally) e.g. executive authority	4.3

adapted from Susanne R. Cook-Greuter (2) and Torbert & Fisher (15)

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So what about Deming's own personal development? My guess is that Deming was becoming a "post-conventional" being in the late 30's – moving from Achiever to Individualist. When I read his 1950 speech in Japan – I hear a "Strategist" speaking. He was probably coming from Alchemist (or later) after being rediscovered in the early 80's. I've heard stories about the darkness of some of the music he was composing in his sixties, and I'm guessing that these works reflected the metaphorical black hole that a person transitioning from Strategist to Alchemist can feel.

At this point the reader may feel in need of some background re: the principles of development theory:

Some principles of development theory - adapted from Susanne Cook-Grueter (2)

Development theory describes the unfolding of human potential towards deeper understanding, wisdom and effectiveness in the world. It provides a way of understanding how people tend to interpret events, and how they are likely to act in many common and uncommon situations.

Development occurs through the interplay between person and environment, not just by one or the other. It is a potential that can be encouraged and facilitated by appropriate support and challenge e.g. practicing "Action Inquiry" with others – more of which later. Growth occurs in a logical sequence of stages or expanding world-views from birth to adulthood. The journey is often likened to an ever-widening spiral. Development in its deepest meaning refers to transformations of consciousness – in perspectives, paradigms, worldviews, and mental models.

A person's worldview/ frame/ stage of development influences what they notice or can become aware of - and therefore what they can describe, articulate, influence, and change. Although a person may use several perspectives in a day, we tend to prefer to respond spontaneously with the most complex meaning--making system, perspective, or mental model we have mastered. This preferred perspective is called a person's "center of gravity" or their "central meaning-making tendency."

It's important to distinguish between lateral and vertical development. Both are important, but they occur at different rates. Lateral growth and expansion (within a stage) happens through many channels, such as schooling, training, self-directed and life-long learning as well as simply through exposure to life.

Vertical development (from stage to stage) in adults is rarer. It refers to how we learn to see the world through new eyes, how we change our interpretations of experience and how we transform our views of reality. It describes shifts in what we are aware of, and what we can pay attention to - and therefore how we can lead and what we can manage, as well as what we can influence and integrate.

As an action-logic each stage or frame determines what you see. Covey (4) reminds us of the importance of understanding paradigms because : what you see is what you do is what you get is what you see... and so on, ad infinitum. Deming too knew about the importance of paradigms and that they are simultaneously both limiting and liberating "Plane Euclidean geometry served the world well for a flat earth... every theorem is correct in its own world" (6). He also knew that each new paradigm is eventually supplanted by a successive, more complex paradigm. I believe that if he were alive today he would be fascinated by the work of Torbert, Beck, Wilber, Cooke-Greuter and others in understanding the archetypal evolution of paradigms - and the integral link between personal and organizational development.

A person who has reached a later stage can understand earlier paradigms/ worldviews, but a person at an earlier stage cannot understand later ones. Without intervention individuals naturally transition every few years until their vertical development halts. The process of shift between stages is usually accompanied by significant discomfort and disorientation. Consequently, the newly birthing stage is denied and sometimes may even be rejected. Breakthrough feels very much like breakdown as the current stage dies. As Torbert says: all adults have experienced the anguish of puberty, the transformation from childhood/ adolescence into adulthood - and having made it through, few of us would want to repeat the experience.

Later stages are reached only by journeying through the earlier stages. Once a stage has been traversed, it remains a part of a person's response repertoire, even when more complex, later stages are adopted. Each later stage includes and transcends the previous ones, the earlier perspectives remaining part of our current experience and knowledge (just as when a child learns to run, it doesn't stop being able to walk). Although it may feel, following transition, as if the previous stage has died (and indeed may be fiercely denied/ rejected when seen in others). Once safely through, it feels to most like they have grown a new skin, and that previous stages are nested inside - like a set of Russian Dolls.

Later stages are not necessarily better than earlier ones. Organizations need people at all stages, in the right numbers. Elliott Jaques emphasized this in his work on requisite organizations (8). Moreover, the model says little about competence in each stage.

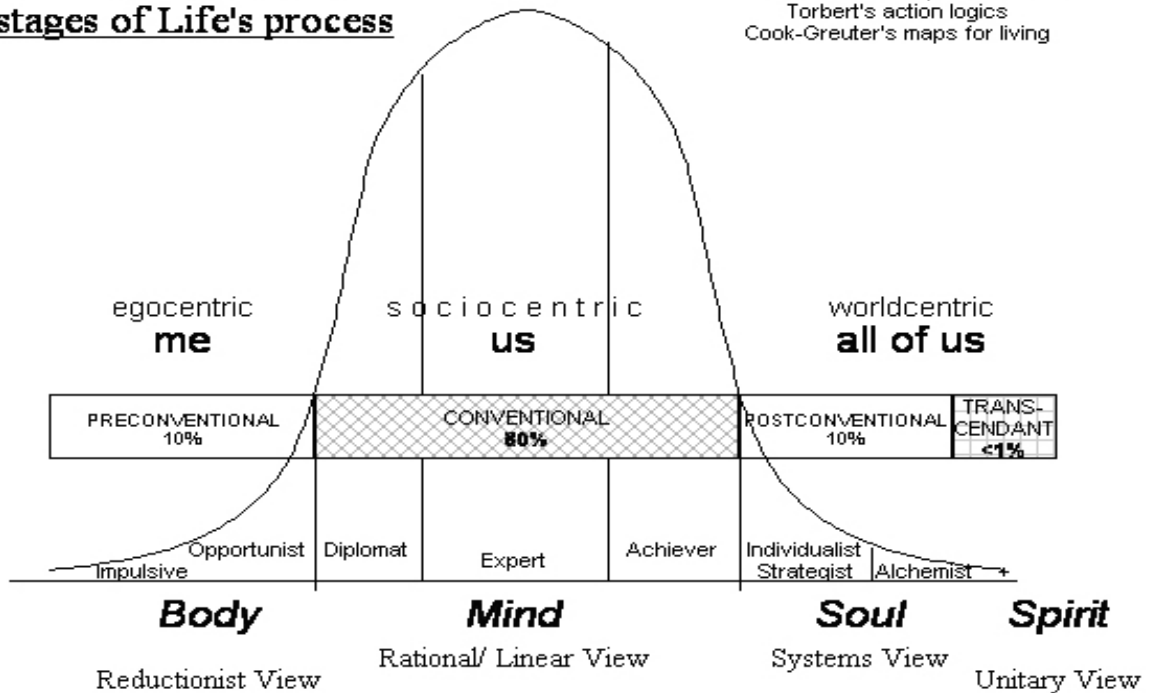
Research has shown that even one competent late-stage person that holds a high-leverage position in an organization will make all the difference in terms of an organization's development (12).

Because acquisition of knowledge is part of horizontal growth, learning about developmental theory is usually not sufficient to help people to transform. Only specific long-term practices, self-reflection, action inquiry, dialogue with a post-conventional coach, or interacting with others further along on the developmental path has been shown to be effective.

The depth, complexity, and scope of what people notice can expand throughout life. Yet no matter how evolved we each become, our knowledge and understanding is never more than partial and incomplete. In general, the world view/ paradigms evolve from simple to complex, from static to dynamic, and from egocentric to socio-centric to world-centric. The stages are sometimes clustered as pre-conventional (Impulsive/ Opportunist), conventional (Diplomat/ Expert/ Achiever) and post-conventional (Individualist/ Strategist, Alchemist +). The proportions typically found in a whole population are illustrated below.

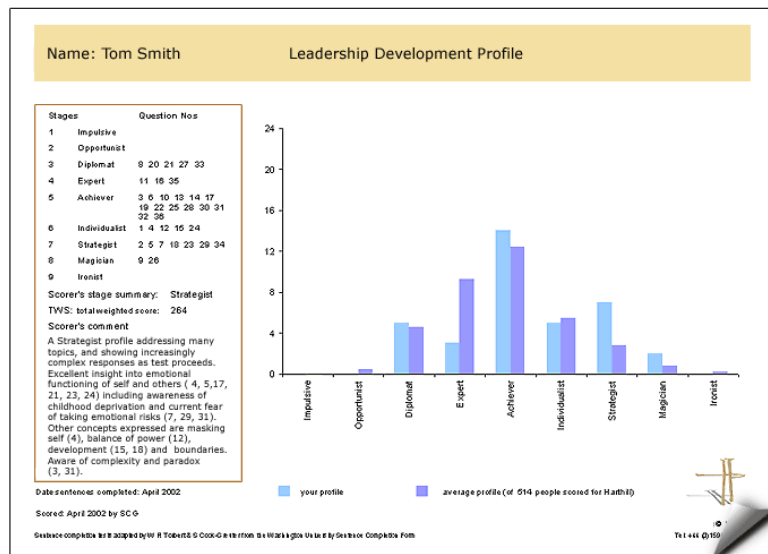
The proportions of people passing through the main stages of Life's process

adapted from :
 Wilber's 4 tier - full spectrum model
 Torbert's action logics
 Cook-Greuter's maps for living



adapted from Susanne R. Cook-Greuter (3)

Following on from Piaget's groundbreaking work on the developmental stages of children in the 50's, others (notably Loevinger, Kohlberg, Graves) researched adult development. And then, in 1970 Loevinger & Wessler created the first measurement instrument to assess adults' stage. Their instrument, The Washington University Sentence Completion Test is now one of the best validated in the field of personality assessment. It has been used in thousands of research projects worldwide. The Harthill Group in conjunction with Susanne Cook-Greuter have further developed it – called the Leadership Development Profile. Here is a sample histogram illustrating how the individual is scored over a range of stages. It's this version that I use as a diagnostic with some of the manager/ leaders I coach – typically the ones that I intuit to be in transition.



The 7 stage model used in this paper is an empirical model (2 & 3) that's been researched over several decades. But the Deming fraternity will need no reminder that all models are wrong, and that only some are useful. I urge you to try it yourself. As a coach and change facilitator, all I can do is vouch for its huge usefulness to me – especially when co-facilitating with colleagues who have access to the same language and ways of making developmental sense of organizational life.

As development unfolds, autonomy, freedom, tolerance for difference and ambiguity, as well as flexibility, reflection and skill in interacting with the environment increase – and one's influencing capability increases. At the same time, defensiveness (e.g. when receiving feedback) will decrease. The following table illustrates the kind of transitions that one might typically expect from stage to stage.

Stage	Action Logic Understanding and response to Feedback	Methods of Influence
Alchemist	Views feedback (loops) as a natural part of living systems, essential for learning and change, but takes it with a grain of salt	Reframes, turns inside-out, upside-down, clowning, holding up mirror to society, often behind the scenes
Strategist	Invites feedback for self-actualization, conflict is seen as an inevitable aspect of viable and multiple relationships	Leads in reframing, reinterpreting situation so that decisions support overall principle, strategy, integrity and foresight
Individualist	Welcomes feedback as necessary for self-knowledge and to uncover hidden aspects of their own behavior	Adapts (ignores) rules where needed, or invents new ones, discusses issues and airs differences
Achiever	Accepts feedback, especially if it helps them to achieve their goals and to improve	Provides logical argument, data, experience, makes task/ goal-oriented contractual agreements
Expert	Takes feedback personally, defends own position, dismisses feedback from those who are not seen as experts in the same field (general manager)	Gives personal attention to detail and seeks perfection, argues own position and dismisses others' concerns
Diplomat	Receives feedback as disapproval, or as a reminder of norms	Enforces existing social norms, encourages, cajoles, requires conformity with protocol to get others to follow
Opportunist	Reacts to feedback as an attack or threat	Takes matters into own hands, coerces, wins fight

adapted from Susanne R. Cook-Greuter (2)

Systemic intervention through Action Inquiry

Why is an understanding of the theory of personal development so important for facilitating organizational development?

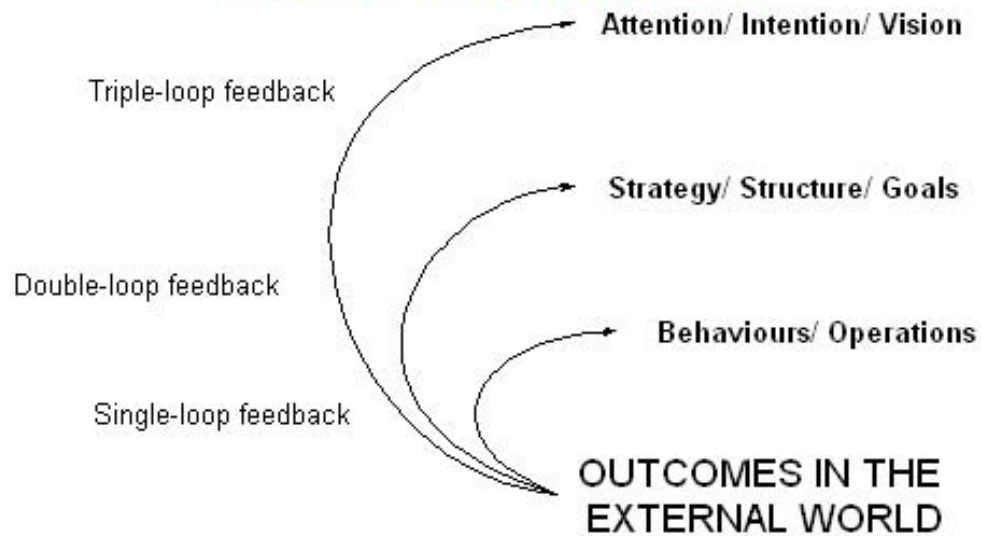
Torbert is advocating a wider use the practice of “action inquiry” - a kind of behavior that is simultaneously productive and self-assessing, so that in a developing situation several perspectives become possible simultaneously. It invites, not just task prioritisation, but also a re-visioning of the task (and of our own action) if necessary. “Action inquiry is always a timely discipline to exercise because its purpose is always in part to discover, whether coldly and precisely or warmly and stumblingly, what action is timely” (16).

You might say – well that's obvious! When don't you want to act in a timely fashion? But action inquiry is the hardest thing in the world to do on a continuing basis. The difficulty arises partly because of the unusual degree of aware-ness of the present situation that high quality action inquiry requires. There are also the many different and potentially conflicting political pressures and standards of timeliness that may be at play in a given situation. But most of all, it's so very hard to develop a taste for making ourselves vulner-able to change at the very moment when we are also trying to get something done (16).

An Achiever will usually accept feedback, especially if it helps them to achieve their goals and to improve, but not until the Individualist stage does a leader/ manager welcome behavioral feedback, and only at the strategist stage would a leader/ manager actually invite feedback in a mutually enhancing way. To accept such “double-loop” feedback can feel to those in more conventional frames like they're losing their very identity.

A Strategist or Alchemist can be open to a deeper spiritual presence or super-vision which is not based on a self-image, but rather on experiencing the ex-change occurring among 4 territories of experience: their at-tention, their strategies, their actions, and their outcomes. In systems theory, this is called triple-loop feedback because, as shown below it highlights the present relationship between our effects in the out-side world and our action, our strategy, and our very attention.

single/ double/ triple LOOP LEARNING



William R. Torbert 2004

Triple-loop feedback enables leader/ managers to be present to themselves in the moment. Such capability becomes the norm only in the later, more post-conventional stages. The ability to interweave research and practice in the present – to interweave subjective, intersubjective, and objective data - subjective data about our own intent for the fu-ture, intersubjective data about what is going on at present from the divergent points of view of different participants, and objec-tive data about what has actually been produced with what qual-ity in the past. People in such a late stage of development are concerned to create an environment pervaded by action-inquiry in the interests of system-wide effectiveness, integrity, mutuality and sustainabil-ity. They can choose to be dedicated to living-out a mutually agreed intent, a shared vision - and to be continually alert to the gaps between vision, strategy, structure, and operational outcomes.

In inviting such multi-dimensional feedback, the post-conventional leader/ manager invites self-transformation – and in so doing invites transformation of their organization – or at least the part of it they directly lead. They would also be able to more easily choose, moment to moment, whether to lead or to manage.

Managing & Leading with transformational intent

How shall I intervene? Manage or Lead? Adapting John Kotter's basic definitions – here are the distinct characteristics of the two systems of intervention :

- MANAGING - a process or system or relationship - aimed at producing predictability, stability and order.
- LEADING - a process or system or relationship - aimed at producing change to bring about a new reality.

In other words, managing is more about doing things to make delivering products & services to customers possible – consistently enough over time for trust to build within an increasingly healthy supplier-customer relationship.

Leading, on the other hand, is more to do with being the living embodiment of a new reality that's needing to be created. Far from controlled stability, it concerns, learning from, but letting go of, the past - and living the preferred future reality now, in the present. The process of leading includes deliberate de-stabilisation, long enough for a new reality to stabilise and get established. It also includes coping with change, chaos and instability coming from beyond the boundary of what is considered to be within the direct influence of the leader.

If you accept the two definitions above, the very notion of “managing change” may seem like an oxymoron. The idea that change can be managed at all appears an impossibility - for how can you destabilise and stabilise things or events at the same time? Is it any wonder that Risk Management has become much in vogue? The main purpose of this paper is to better understand how we think and feel about leading and managing such that we can be more aware of how we may productively engage in both processes simultaneously.

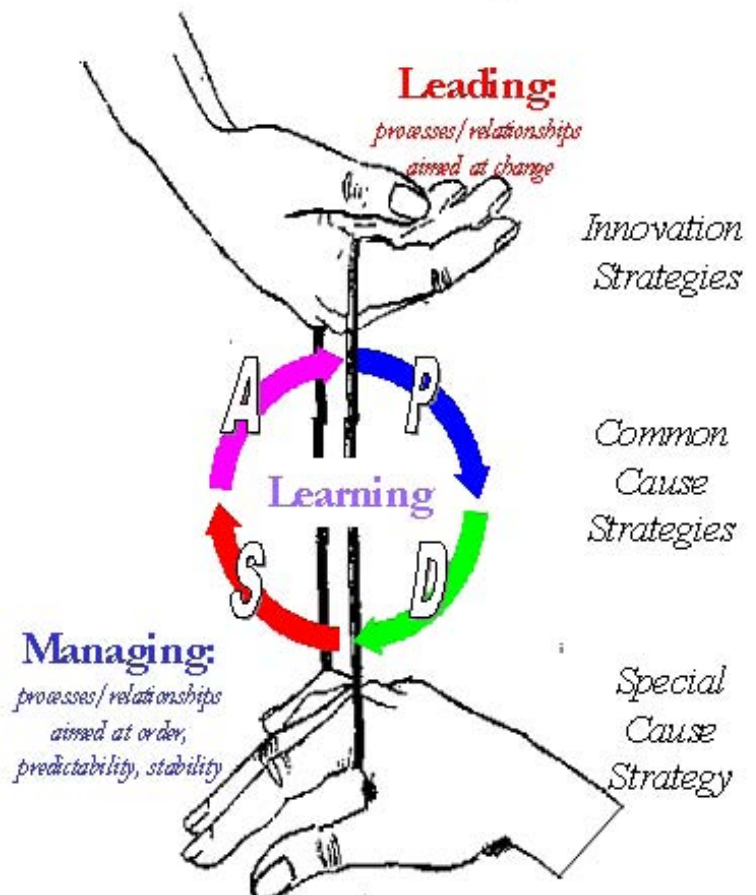
Choosing from moment to moment, from process to process, whether to manage or lead, will be a tension – hopefully a constructive rather than a destructive tension. But that depends :

What happens all too often is that leader/ managers implement ill thought through plans, without properly designed experimentation (i.e. the Learning/ Cost ratio is low), and without a clear and fully shared set of expectations or end-in-mind.

Moreover, the few critical processes of which stability (predictability) is demanded by customers, and that therefore require good management, are often not treated in this way – either because they are continually tampered with, or because those accountable for the process fail to see the virtue in maintaining stability and the deep learning that can be derived from this.

The importance of having a few (even one) developmentally late-staged individuals in key positions is underlined here. Striking a good balance between constructive and destructive intervention may well depend upon it. Such an individual is likely to inherently appreciate the two processes of leading and managing – and have an intuitive sense of which to use when. The two processes are mapped as an appendix to this paper. If you refer to them now, you will notice immediately that the driving force in both processes is the process of Learning – the essence of which is experimentation (referred to as PDSA).

Integrating Leading and Managing with Learning



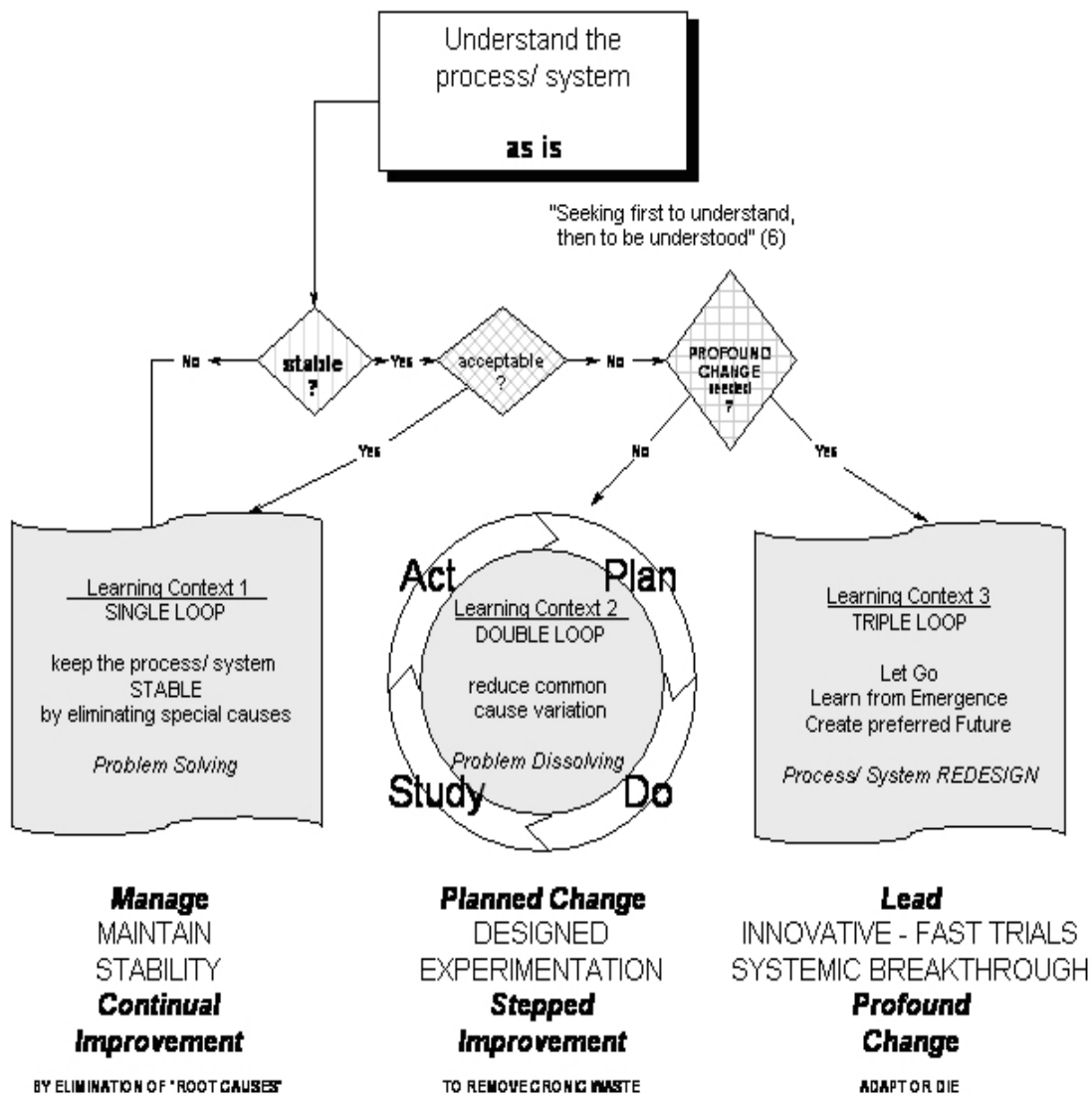
The diagram above is meant to capture the sense of tension between managing and leading. When coaching executives, I sometimes notice it, and name it as a tension – and doing so virtually always strikes a resonant chord, as all executives continually wrestle with these two apparently contradictory processes. Next, I often might suggest to the coachee that they start to lead by managing (stabilizing) a few well-chosen processes – in order to create the conditions in which systemic experimentation may begin – and so that change can happen in a way that maximizes the learning identified as being of the highest strategic importance for their organization.

The third process/ mode of intervention : Experimenting

The insight that Shewhart, and later Deming, had was that if manager/ leaders could be taught how to systematically experiment i.e. conduct real time action research – and if organizational structures could be put in place to enable both the experimentation and the retention of knowledge generated over time – then huge enhancement in organizational efficacy could be unleashed – indeed enormous competitive advantage would be created. 70 years later, when we watch the development of organizations like Toyota, we know just how much of a difference.

The diagram below serves to illustrate simply how such a manager/ leader might apply each of the 3 intervention strategies.

Three contexts for Transformational Learning/ Intervention



Julian Simcox Feb 2001

I'm proposing that there are just three generic intervention modes: MANAGE, EXPERIMENT, or LEAD.

Let me now expand a little on each:

Choosing how to intervene: 3 strategies for 3 contexts

MANAGING WELL:

(Learning context No.1)

Carefully select a few critical processes (preferably with the help of your customers & other stakeholders) which require consistency and sustainability, and for which you can take responsibility. Set-up both results-based and process-based measures which when control charted enable continual monitoring for stability and can detect signs of instability (chaos) in real time.

Aim to keep the chosen process stable and (hence) predictably on target (as defined by the customer) - with minimum variation (17). Act on the signals indicating that special causes of variation are present, and act to eliminate these (root) causes - effectively reducing the inherent variation and increasing consistency.

This is the definition of "continual improvement" as coined by Walter Shewhart when working in Bell Telephone's Hawthorne Plant in the 1920's and 30's, as he helped managers there in their quest for a uniformity that their customers would find more dependable. It also in effect defines the process for good management.

Shewhart saw two kinds of variation being wrestled with by the managers running the Western Electric Company's Hawthorne Plant.

1. *Variation from chance causes, the same causes from hour to hour, lot to lot, worker to worker. (Deming's term was Common Cause variation)*
2. *Variation from an assignable cause. (Deming's term was Special Cause variation)*

How did the problem arise? The Hawthorne plant managers sought to achieve uniformity, so that the customers (telephone companies) who bought their product could depend find it dependable. The aim was noble. Their methods, though, were folly. They took action - making some kind of a change at every sign of departure from uniformity. They were smart enough and honest enough to observe that their actions only made this worse, and sought help - they called in Shewhart, a theoretical physicist who happened to be working at the newly formed Bell Telephone Laboratories in New York.

It is noticeable in my work today just how commonplace it is to find managers intervening with insufficient awareness of what is happening or what might happen - and then denying the unpalatable results. I frequently come across leader/ managers who seemingly work under the assumption that their actions can lead to one of only two outcomes: things get better, or nothing changes. At least the managers at Western Electric asked for help - and Shewhart was able to tell them that they themselves by their interventions were frequently making things worse rather than better. Deming later referred to this as "tampering".

Shewhart realized that there were two kinds of mistake when intervening to achieve uniformity.

- MISTAKE 1. Attribute an outcome to a special cause of variation when actually it came from common causes of variation.
- MISTAKE 2. Attribute an outcome to common causes of variation when actually it came from a special cause.

Both mistakes are costly. If you assume an event is a special cause when in fact it is common to the system, you might end up wasting time explaining something which isn't worth talking about - or you might jump into action when it would have been better doing nothing - or you might single out someone for praise when it is not merited; - or you could blame someone for something outside of their control - or you might change a forecast needlessly - or you might increase variation by making an unnecessary adjustment to the process.

If you assume an event is due to common cause variation when in fact it is a special cause, you could well end up spending money to change a process needlessly - or waste money training everyone when only a few need help - or make the process more complex e.g. by requiring all output to be inspected - or you might charter a team to address an issue when there isn't an issue - or you might change the process when doing nothing would have been better - or you may miss an opportunity to find a genuine root cause and reduce variation.

Anyone may vow from this moment henceforth, never to make Mistake 1. Simply attribute any outcome to common causes. In doing this however, they will maximize their loss from Mistake 2.

Likewise, anyone may henceforth vow never to make Mistake 2. Simply attribute any outcome to a special cause. In doing this however, they will maximize their loss from Mistake 1.

It would be good never to make Mistake 1 and never to make Mistake 2. This unfortunately is impossible.

Shewhart settled on a different aim: make Mistake 1 now and then. Make Mistake 2 now and then, but regulate the frequencies of the two mistakes to achieve minimum economic loss from the two types of mistake. To this end, he gave to the world the Control Chart, with 3-sigma limits, as a guide for pro-action. The control chart does a marvellous job and under a wealth of applications works. The ubiquitous XmR Chart in particular is easy to calculate and to use, and works in at least 90% of organizational situations in my experience.

In gifting the control chart methodology to manager/ leaders and workers in the Hawthorne Plant, Shewhart in effect bestowed post-conventional real-time thinking and dialogue on the 80% of organizational people who make sense of their world conventionally. A learning organization – perhaps the first - was born.

Statistical stability may be achieved by hunting down and identifying each special cause in real time – at the moment a point goes outside the control limits - and then taking appropriate action to bring the process back into a stable state. This not only maintains uniformity for the customer, but with the right action ought to enable the work team to improve the level of uniformity – leading to improvement in the whole system i.e. for the customer's customers, AND the customers of those customers.

A popular concept these days is "**Leading on the edge of chaos**" – that leadership is somehow all about being able to be tolerant of chaos (instability). Shewhart effectively provided a means of enabling individuals throughout an organization to manage (and lead) proactively by being able to distinguish moment-to-moment whether the process of most interest is experiencing chaos or not. He created the possibility for everyone, not only the special few post-conventional meaning-makers, to both manage and lead well.

EXPERIMENTING OR PLANNING CHANGE WELL:

(Learning context No.2)

Walter Shewhart also was amongst the first to advocate the use of a formal learning cycle: PDCA (later amended to PDSA by Shewhart's student, Deming):

ACT - adopt the change, or abandon it, or run it through the cycle again



PLAN a change or a test, aimed at improvement

STUDY the results. What did we learn? What went wrong?

DO - carry out the change or the test (preferably on a small scale)

after W Edwards Deming
The New Economics 1993

Shewhart suggested that stepped change for more rapid process/ system improvement is possible by designing experiments to test improvement theories - mostly generated from within the team that works in the process. Testing theories, one-by-one, requires rigorous method., but is a core skill for the empowered leader/ manager wanting to make changes to the process for which they are responsible –whilst continuing to deliver what the customers have been promised. The Control Chart, sometimes now called a “process behavior chart” (17), enables the manager and team to see clearly the effects of their experiments - beneficial or not. In this way knowledge and learning can be accumulated in a coherent manner. A well-designed experiment achieves maximum learning at very low cost - thus enabling risk to be effectively managed. This thinking has strategic implications, organizationally, as well as for local process management - for risk is the central issue at every level. “Getting to the future first is less about making heroic investments than it is about de-risking heroic ambitions. Unless the assumed link between ambition and risk is severed, few managers will have the courage to commit to global leadership”(11)

So why not experiment all the time on every process? Because there are too many processes, and problem dissolving through even well designed experimentation is costly. Better to rely on Learning Context No.1 - the elimination, one by one, of special causes where the process is already capable of meeting customer requirements, yet may still be improved as a by-product of problem solving and maintaining the process in a stable state (an unnatural state for a production process).

The tacit knowledge creation system that underlies the Toyota Production System can be captured in 4 basic rules. These rules guide the design, operation, and improvement of every important activity, connection, and pathway - for every product and service:

Rule 1: All work shall be highly specified as to content, sequence, timing and outcome.

Rule 2: Every customer-supplier connection must be direct, and there must be an unambiguous yes-or-no way to send requests and receive responses.

Rule 3: The pathway for every product and service must be simple and direct.

Rule 4: Any improvement must be made in accordance with the scientific method (PDSA), under the guidance of a teacher, at the lowest possible level in the organization.

Though basic, these rules have surely been created by post-conventional meaning makers. They have evolved in this way because they work, and they work because of the spirit of collaborative experimentation embodied within them. They may appear rigid at first blush, but their very rigidity is liberating for an organization that learns well. A true sign of a highly evolved organization is its ability to operate liberating disciplines. (15) “All the rules require that activities, connections, and flow paths have built-in tests to signal problems automatically. It is the continual response to problems that makes this seemingly rigid system so flexible and adaptable to changing circumstances”(13)

LEADING WELL:

(Learning context No.3)

It is tempting for manager/ leaders facing a difficult situation, which feels chaotic, to change several things at once - they may even feel that there's too little time for any other approach, and of course this may be true, due to the global pressures of competing against manager/ leaders in other companies who are managing & planning change faster and better than you.

However, changing several things at once is risky and can lead to disaster. It is not difficult to find manager/ leaders who will tell you that they had nothing to lose – “ it was a *backs-to-the-wall job* and we simply had to go for it, and we simply *had to* change many things all at once”. It is however virtually impossible to find a manager/ leader who will tell you that such an approach led to disaster, either because they are too ashamed to tell you of the chaos that they caused - or because they and their organizations have since disappeared and are no longer available for interview.

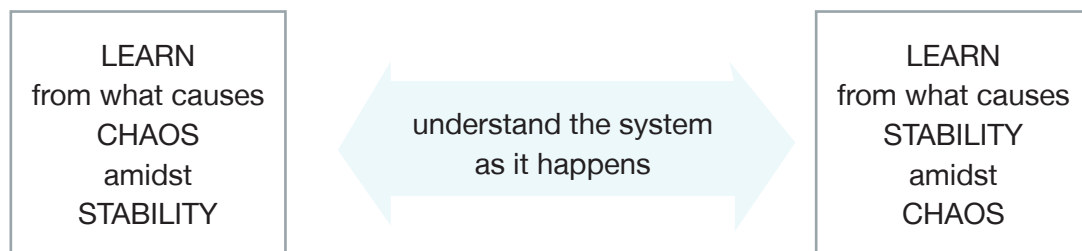
Nevertheless, sometimes the very aim of the system has shifted, or customers themselves have fundamentally altered their requirements e.g. from carburetors to fuel-injection systems. Responding to this level of change requires innovation or breakthrough. It requires nothing less than a whole system process redesign. Profound change requires the stuff of leadership. A letting-go of out-moded process - to make way for some new and hopefully better process. Agreeing a map of what is wanted/ needed and moving towards this new reality whilst carrying *everyone* (unless the process is a personal one and you are unavoidably alone) with you - even if it feels like a leap in the dark.

Ironically, such profound shift requires stability as a starting point even more so than in Context No.1 (the process of managing) - for rapid learning is very difficult in conditions of instability. If you don't believe this, just take a moment to recall how you first learned to ride a bike, or to swim. I often ask groups of people to do this and it is not unusual to find someone who can't ride a bike, or who can't swim. When asked to describe what happened when they tried, they almost always describe some kind of trauma when being taught in an unstable (literally) situation - most often when the teacher was out of tune with the instability being felt by the learner. Most parents teaching their child to swim or ride for the first time attempt to simulate stability at least temporarily by running alongside to support the child. This most challenging of tasks is all the easier in modern times because of buoyancy aids and stabilizers.

Central to the process of leading therefore, is the skill of generating stability (order) out of the chaos - this is especially important because during major change and transformation much less is predictable, much less is plan-able, and much more is emergent. Ignoring what comes up unexpectedly moment-to-moment, and then adjusting (with or without tampering) is to court disaster.

Dee Hock, founder of the Visa Credit Card network in the 60s, has coined the phrase "chaordic" to capture the essence of what it takes to lead well i.e. a high level of understanding and awareness. He describes it as like being tuned in to two radio frequencies at once - Radio Chaos & Radio Order (7). When people refer to others as great leaders, they are reflecting their sense of someone with multi-dimensional sensing who knows, apparently magically, how to transform situations, processes, systems, organizations, and themselves. Such leaders appreciate more than anyone the power of managing well.

"Chaordic" Awareness for Action/ Learning



"chaordic" is a word coined by Dee Hock in 1995

Jim Collins (1) calls it Level 5 leadership. In his recent 5 year study of exceptional companies he discovered that only 11 companies out of 1435 which were listed in the Fortune 500 during 1965-95 could be considered "great" - defined as having had cumulative stock returns at or below the general stock market for 15 years, punctuated by a "transition point" which was then followed by cumulative returns at least three times the market over the next 15 years. Those that made the cut averaged cumulative stock returns of 6.9 times the general stock market for the 15 years after the *point of transition*. To put that in to perspective, General Electric under Jack Welch outperformed the general stock market by a mere 2.8 times during his tenure from 1986 to 2000.

Collins' research team found that in all 11 cases there was a key individual at the helm, and who in each case seemed to possess something distinctive and special. Despite not believing the data, his research team kept telling him "We can't ignore these top executives, there is something consistently unusual about them" (1). He tried to argue with them that many of the comparison companies must have had great leaders too - but eventually the data proved incontrovertible.

Maybe organizations that have a reputation for being well managed are underpinned by an extraordinary leadership process that is borne of an appreciation for the irony that you best make change happen by first making it possible to keep things as they are - an aspect of what Jim Collins calls "Level 5 duality" (1). The irony is that it takes a great leadership process to enable a great management process. Shewhart's genius was that he was able to provide a tool that enables insightful leadership & management to happen at all organizational levels, including the shop floor - provided of course that those in overall charge take sufficient responsibility for the whole system, and are capable of creating an empowering environment in which people can continually use the control chart and a few other learning tools to provide the insight necessary for improving *their* processes. Another irony is that there's as much insight and learning to be had from managing (keeping things the same) as from leading (causing things to change).

A person's worldview/ frame/ stage of development influences what they notice or can become aware of - and therefore what they can describe, articulate, influence, and change. Although a person may use several perspectives in a day, we tend to prefer to respond spontaneously with the most complex meaning--making system, perspective, or mental model we have mastered. This preferred perspective is called a person's "center of gravity" or their "central meaning-making tendency."

It's important to distinguish between lateral and vertical development. Both are important, but they occur at different rates. Lateral growth and expansion (within a stage) happens through many channels, such as schooling, training, self-directed and life-long learning as well as simply through exposure to life.

Putting it all together: 3 modes of intervention x 7 Developmental Action-logics

Here are two matrices – each with 21 cells – their purpose to illustrate the 7 main developmental Action-Logics when applied to the 3 modes of intervention. The first is for a conventional organization, with no special attention paid by its senior leaders to the creation of structures that enable continual learning. The second represents a Learning Organization (a la Toyota) with structures and disciplines that liberate continual learning.

CONVENTIONAL ORGANIZATION

	MANAGING	EXPERIMENTING	LEADING
Alchemist	I see many levels, patterns, archetypes, in an eternal Now. And from this multi-dimensional "chaordic" viewpoint high-leverage sub-processes can be chosen for owner-identification and intervention.	We live in a universe that is alive, creative, and experimenting all the time to discover what's possible, using messes to get to well-ordered solutions, finding the opportunities/ possibilities, and what works rather than what's right.	A healthy system depends upon appropriate leading and managing at each organizational level, and upon a few like me who can influence the creation of a Long Term (7- 50+ years) whole/ integrated strategy.
Strategist	I manage systems in alignment with principles, mostly self-created, using gaps as a means to refine the principles and drive adaption to the outside world.	I expose and test assumptions/ questions/ theories to create Double Loop inside-out Learning – all in the interest of system integrity.	I see what emerges and create an environment pervaded by action/ inquiry in the interests of system-wide effectiveness, integrity, mutuality and <i>sustainability</i> .
Individualist	I don't mind being the one who breaks the rules to test the boundaries. I'm increasingly thinking systemically, wrestling with complexity and multiple answers.	I'm more open to the possibility of serendipitous learning. Being explicit about our assumptions, our theory, our specific expectations, at the outset of a pilot helps learning about our selves and the system or process.	My influence as a leader may increase if I withdraw and consciously choose the role I need to play, within this organization that I now view as a complex system.
Achiever	I'd rather do the right things than to blindly do things right, but I know what my goals are. When I see a problem, I'll find its (one) root cause and deal with it.	We'll run a pilot if there's time, otherwise we'll Plan-Do-Review. We should agree what actions are needed, and then carry them out.	I'm concerned about the wider system, but experience tensions between detail and big picture. I'll initiate sporadic (if indiscriminate) action.
Expert	I'm interested in perfecting my immediate process or project. I prefer to approach things objectively and sequentially, preferably one action at a time.	I'm prepared to run experiments but only if required to do so. Teamwork helps, provided that every individual adheres to the rules.	I take the lead by giving people the knowledge they need to do their job. As Leader I believe in acting fairly, even if this means having to treat everyone the same.
Diplomat	Leave me alone to do my job. "Please don't criticise me." I avoid up-stream/ downstream conflict where I can.	I avoid trying anything new, or not expected of me, for it might lead to trouble. I deny even serendipitous learning.	Only one person can hold power over my group, and I'd prefer it was someone else.
Opportunist	I trust to luck. Manipulate symptoms. Flout any laid-down rules.	I'll "try it on" to see what I can "get away with". I test rules – to destruction, with little consideration of consequences.	I order events, so that others will do as I say. "If you scratch my back, I'll scratch yours." "I'll trade an eye for an eye."

LEARNING ORGANIZATION – with liberating disciplines

	MANAGING	EXPERIMENTING	LEADING
Alchemist	We can generate diversity at low cost if we observe “reflective patience, the discipline to leave well enough alone and let results unfold. It takes discipline (and courage) to focus attention on nurturing relationships among steps in the work.” (9)	I’m watching for opportunities for Meta Learning – and how to adapt and shift the system for the next generation/ epoch.	More than merely respond and continually adapt to external forces. We have an opportunity to influence and lead our community, our industry, our world.
Strategist	My role is to help managers and team leaders understand their responsibilities and enable them to carry them out. Improving actual operations is not my job—that’s the job of the in-process people. I ensure the structures are in place to enable them to do it.	I ensure work is constructed as a series of nested, ongoing, experiments - that will yield continual learning and improvement, whether the work is routine or complex.	My role is to accomplish continual adaptation to the changing external world and to serve the market. I know that it’s the underlying principles rather than specific tools and processes that give the company competitive advantage.
Individualist	I integrate the work system with the wider system (including external suppliers) with requisite structure – and maintain its integrity.	I observe people and machines and ensure countermeasures are structured as experiments to be tested. I obtain approval for all my own proposed changes from the people actually doing the work.	I act as an enabler/ developer - a coach rather than a technical specialist. I’m learner, leader, teacher - to assist and enhance people’s powers of observation and experimentation.
Achiever	I build my system’s collective knowledge so as to achieve the ideal result <ol style="list-style-type: none"> 1. defect free for the customer 2. smallest batch size possible 3. supplied on demand 4. delivered immediately 5. produced with zero waste/ cost 6. safe work environment (14) 	I live the ideal, and try to model the ideal – in order to build capacity and capability over time – even up to 2-3 years. I apply the scientific method to improving all organizational processes identified as core e.g. the knowledge storage and retrieval system.	I lead by role modeling the philosophy - and build effective inter-company communication, so that goods & services can flow consistently through the supply chain.
Expert	I know that if the activity is done as specified, our product/ service will be defect free (on target with minimum variation). I see to it that people know their job, that deviation from optimum is observable in real time, and that knowledge is standardised and adhered to.	I inculcate the <i>scientific</i> method to ensure that people are clear about the expectations they will be testing when they implement the planned changes – in an activity, connection, or flow path - that will improve cost, quality, lead time, batch size, or safety by a measured amount.	I lead by asking questions, to ensure people are sticking to the rules. I’m the embodiment of technical and process knowledge. Pride & respect come from acquired knowledge. Change is controlled via systematic experimentation.
Diplomat	As a team member, I don’t like conflict or to be criticized, but in this system it’s made easy to admit errors, as they’re seen as useful for us learning about our process.	I avoid trying anything new, but it’s expected that I try to improve the process, so I volunteer suggestions for improvement whenever I can, and play my part in organized group experimentation.	The Team Leader let’s me know what I need to do, and helps us share what’s changing and what must change. I may unilaterally stop the workflow – as I know I won’t be persecuted for it
Opportunist	I work within a system that’s so closely specified nothing is left to chance. Everything is made visible, so there’s no real opportunity to cheat – and it pays to play the game.	As new methods are tried-out, I get asked questions about what is changing, and what is staying the same – normally I don’t like “fessing-up” but here it pays.	I’m not allowed to make changes unless I can demonstrate the capability and the knowledge – it pays to keep your nose clean and follow rules to the letter. If I break them I tell someone in authority.

Conclusions & after word

- By developing Shewhart's ideas, Deming (with help from Taguchi) in effect gave the world the definition of management: achieving and maintaining stability - by keeping processes predictably on target with minimum variation. I personally experienced Deming as passionately interested in the difference that good management could make in the world, but in his last few years he talked more explicitly about leadership as distinct from management. The working title for his final book was "back to the individual" – at the end of a productive life enabling organizations to be better managed as a whole system, he came to the realization that individuals as whole systems have a key role.
- Deming knew that organizations that are structured to learn need systems thinking – and that organizations need leader/ managers who are sufficiently developed to know how to think and intervene systemically - in other words he recognised the need for personally developing the capability to lead (and manage). I believe he would not have been surprised by Jim Collins' research findings on the quantum difference that post-conventionally thinking/ feeling leaders make.
- By giving us the Control Chart - enabling people to distinguish moment-to-moment whether the process of most interest to them is experiencing chaos - Shewhart effectively provided a means of enabling individuals throughout an organization to manage (and lead) proactively - regardless of their personal stage of development. Following in his footsteps, Deming sought to find ways to create organizational structures that could accommodate the huge potential for organizational learning made possible by Shewhart's invention.
- Deming was passionate about creating systems and structures that enable knowledge to be generated and retained. His impact in Japan demonstrates the efficacy of establishing structures in which double-loop learning becomes possible for people at the Diplomat and Expert stages of development – I hope my second matrix sufficiently captures the essence of how double-loop learning can be embedded in a organization that's structured for learning.
- In the UK (at least), the movement that was created around Deming in the late 80's was dominated by Statistics, and to a lesser extent maybe the Theory of Knowledge and Systems Thinking. He surprised a lot of people when he made PSYCHOLOGY one of his 4 elements in the System of Profound Knowledge. He might have simply called it PEOPLE – he might have called it Sociology, or maybe Social Psychology, but he called it Psychology - the study of the mind. I believe he bequeathed the SoPK because he intended us to continue to explore both individual motivation and paradigm development.
- Empathy for paradigms and their evolution is needed, and empathy comes from seeking first to understand (4). Deming seemed to understand the importance of developing empathy for different worldviews – he knew that each contains coherence, just as in its own world Euclidian geometry makes perfect sense. When consulting he spent much of his time listening and asking people questions that might develop paradigm understanding – theirs and his.
- The work of Torbert, Cook-Greuter and others gives those who seek to intervene productively into organizational and personal systems a practical way of diagnosing the particular worldview that pervades a client system - in order to determine what's needed to leverage learning. I hope I've succeeded in convincing you that the personal paradigm development of leader/ managers increases their awareness, power and capability for spawning the progressive development of their organization. I know from my own work just how powerful my client system interventions can be when I'm armed with knowledge of the developmental stage of key individual leader/ managers.
- Torbert also uses a developmental model for organizational development (not referred to in this paper), that parallels the individual model described here. If I have sparked your interest, I refer you again to his most recent book (16) in which he elegantly describes 3 cases that illustrate the power of intervening in a client system when equipped with diagnostic knowledge of key individuals, and of the organization as a whole system.
- Whatever your own developmental center of gravity, I'm hoping that as a consequence of reading this paper you will start to lead more power-fully, to experiment more fruitfully, and to manage more wisely.

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