Why aren't we all working for Learning Organisations?

Professor John Seddon and
Brendan O'Donovan

Why aren't we all working for learning organisations?

Professor John Seddon and Brendan O'Donovan

Abstract

Revisiting Peter Senge's work 'The Fifth Discipline' twenty years on, the authors reflect on why there are not more 'learning organisations' around us. They conclude that W Edwards Deming's critique of Western management practices apply as equally to Senge's ideas as they do to those of other theorists. By using Argyris's model of 'Double-Loop Learning', the authors suggest a way for managers to switch from a 'command and control' to a 'systems thinking' mindset in order to achieve genuine organisational learning.

Keywords: Senge, Seddon, systems thinking, learning organization, double-loop learning.

In Peter Senge's best-seller The Fifth Discipline (Senge, 1990), he popularised the idea of the 'learning organization'. In the book, Senge defined learning organisations as:

"… organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together." (Senge 2006 p3)

Learning in this context has a specific meaning for Senge, which he terms 'metanoia', a Greek word meaning 'a shift of mind'. A learning organisation is therefore: "… an organization that is continually expanding its capacity to create its future.

"For such an organization, it is not enough merely to survive. 'Survival learning' or what is more often termed 'adaptive learning' is important

"For … an organization, it is not enough merely to survive. 'Survival learning' … must be joined by 'generative learning,' learning that enhances our capacity to create."

indeed it is necessary. But for a learning organization, 'adaptive learning' must be joined by 'generative learning,' learning that enhances our capacity to create." (Senge 2006 p14)

Getting organisations to 'shift their minds' in order to produce both adaptive and generative learning was the intent of Senge's work twenty years ago. Fortune magazine went as far as predicting that "the most successful corporation of the 1990s will be something called a learning organization, a consummately adaptive enterprise." (Fortune 1989, in Senge 1990).

So why is it that these predictions do not appear to have materialised in 2010? Why do we not see examples of learning organisations all around us?

We believe that the biggest clue as to why we are not all 'learning organizations' was given by W Edwards Deming, one of the original reviewers of the book back in 1990. As Senge commented after reading Deming's review, he "slowly started to realize (Deming) had unveiled a deeper layer of connections, and a bigger task, than I (Senge) had previously understood" (Senge 2006 p x).

Deming's review said:
"Our prevailing system of management has destroyed our people. People are born with intrinsic motivation, self-respect, dignity, curiosity to learn, joy in learning. The forces of destruction begin with toddlers – a prize for the best Halloween costume, grades in school, gold stars – and on up through the university.

On the job people, teams, and divisions are ranked, reward for the top, punishment for the bottom. Management by Objectives, quotas, incentive pay, business plans, put together separately, division by division, cause further loss, unknown and unknowable." (Deming in Senge 2006)

It is our contention that Senge's work did not tell managers how to tackle this "deeper layer of connections" that was necessary before they could become a 'learning organization'. However, a combination of the works of Chris Argyris (Argyris 1999) on intervention theory and Deming's own

systems perspective on management can provide us with a way forward. We will go on to explain this in more detail, and also to present a systems archetype for managing a generative transactional service.

Command and control: the prevailing system of management

One of the authors of this article (John Seddon) has worked extensively with service organisations and has developed his own term for the elements of Deming's "prevailing system of management". Seddon and Caulkin have defined 'command and control' management thus:

"Command and control means regulation by management, with its battery of computer and other informational aids … where decision-making is distant from the work and based on abstracted measures, budgets and plans" (Seddon and Caulkin 2007 p12)

"Command and control means regulation by management, with its battery of computer and other informational aids … where decision-making is distant from the work and based on abstracted measures, budgets and plans"

Command and control ideas have their roots in Taylorism (Taylor 1998 - first published 1911) and the mass production innovations of Henry Ford (Ford 2003 - first published 1926) and Alfred Sloan (Chandler 1977). Command and control thinking continues to see organisations as top-down hierarchies, where work is designed in functions, managers make decisions and workers do the work.

Managers make decisions using budgets, targets, standards; they seek to control the workers with a variety of management practices: procedures, rules, specifications, inspection and so on. The management ethic is to manage budgets and manage people.

These features of a 'command and control' mindset manifest themselves in service organisations as an obsession with managing the activity of workers. This has been characterised as forming the 'Core Paradigm' for conventional service management (Seddon2008) and consists of three questions which preoccupy managerial decision-making in transactional service organisations such as financial services, telecommunications, IT services, police, local authority, government agencies and housing services.:

- How much work is coming in?
- How many people have I got?
- How long do they take to do things?

In this dominant management paradigm, managers think of their job as a

resource-management problem. It leads managers to do the following types of things in pursuit of improving service operations:

- Reduce average activity time (through procedures, job aids, call coaching and targets)
- Use I.T. to replace, support or control the service agent
- Outsource activity to lower-cost organisations/economies
- Increase functional specialisation (to reduce training costs)
- Standardise work processes
- Put similar work into back-office factories

These are all examples of what Argyris and Schön would call the actions of a manager going through 'single-loop learning' (Argyris and Schön 1974).

For Argyris and Schön, single-loop learning involves improving incrementally through learning new skills or capabilities, with managers perhaps learning to do something better but without challenging the underlying beliefs and assumptions behind their problems (see Fig 1). In Senge's language, this is what he describes as 'adaptive' learning (Senge 2006 p14).

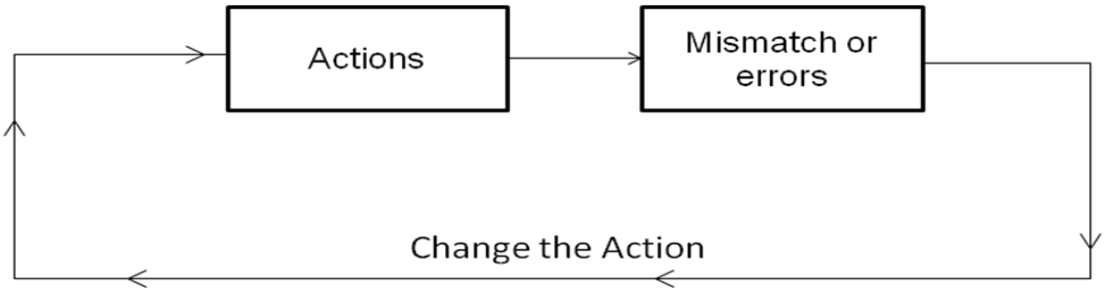

Fig 1: Single-loop learning (from Argyris 1990 p92)

Managers assume that people need to be commanded and controlled

So, the problem as it is conceived by managers in the 'Core Paradigm' is how best to manage activity. Managers assume that people need to be commanded and controlled (Seddon 2003). Scripts, procedures, targets, standards, inspection and compliance govern the way that these organisations work. The managerial tactics listed above are all essentially concerned with managing cost. For example, a call centre manager might be tasked with reducing costs in line with an enforced efficiency target dictated higher up the hierarchy. In order to do this, he/she might decide to focus on service levels: how long it takes an operator to pick up the telephone. Also, by imposing a standard time on calls, the manager may

think that calls will be cheaper. But when the manager is then unexpectedly faced with rising costs due to rising 'failure demand' (Seddon 2003) as explained in greater detail below, he/she might decide to impose scripts on the workers.

When this is equally unsuccessful, the manager may enforce greater inspection of work to ensure the workers are complying with the scripts, so as to ensure they reduce the time taken per call. We see that managers become further and further entrapped in the core paradigm described above, where their focus becomes fixed on making the worker work harder. The manager becomes ensnared in 'single-loop' learning, unable to see the deeper assumptions beneath their actions.

Senge represented many of his ideas in a series of systems archetypes, saying that "the template shows the basic structural form of the archetype but lets managers fill in the variables of their own situation" (Senge 1990 p17). We have represented the command and control view of service work as an archetype:

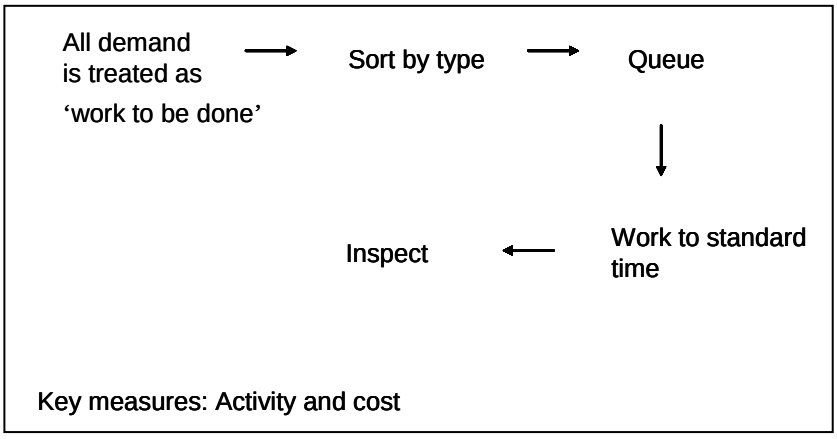

Fig 2: Command and control archetype for factory service management

This archetype is a high-level representation. In practice, service organisations are much more complex but the complexities, nevertheless, follow this quintessential logic. Managers schedule resources according to the volumes of work coming into the system.

Usually, the first step in the flow is to 'sort' the work by, for example, using interactive voice response [IVR] systems in telephony ("press 1 for x, 2 for y") and with incoming mail the work is typically scanned and sorted into pre-determined electronic work queues, often breaking one customer

demand into a variety of sub-tasks, allocating each to its own queue. When work is done it is managed by 'standard times', the assumed time it takes to complete each task and resources are devoted to inspection to control the output to the customer. Often a customer demand into such a system is fragmented into many sub-tasks and consequently the flow of work crosses functional, organisational and geographic boundaries. For managers imprisoned by what Deming called the "prevailing system of management", efficiency is assumed to be associated with controlling the costs of activities.

"… most possibilities for improvement add up to proportions something like this: 94% belong to the system (responsibility of management) 6% special."

Deming's insight: focus on the system

The assumption is mistakenly being made that performance is all about people and their activity. It is, as Deming pointed out, to focus on the wrong things:

"The fact is that the system that people work in and the interaction with people may account for 90 or 95 percent of the performance"
(Deming, in Scholtes 1998 p296)

"I should estimate that in my experience most troubles and most possibilities for improvement add up to proportions something like this: 94% belong to the system (responsibility of management) 6% special." (Deming 1994 p xv)

To escape this organisational prison, Deming instead advocated that management's focus ought to be with the flow of work through the broader organisational 'system', rather than measuring and managing work in functional activities.

Operating at this 'system' level achieves far more than focussing on the refinement of individual functions and/or processes. His famous "Figure 1" – a picture capturing the flow of work through a manufacturing organisation – became notorious because it was often the only visual aid he would use to orientate his post-war Japanese audiences as to what to pay attention to when considering their work as leaders.

He believed that constancy of purpose to improve the system should be the cornerstone of management's efforts; his figure served also to provoke

discussions of what the suitable method and measures of achievement of purpose should be.

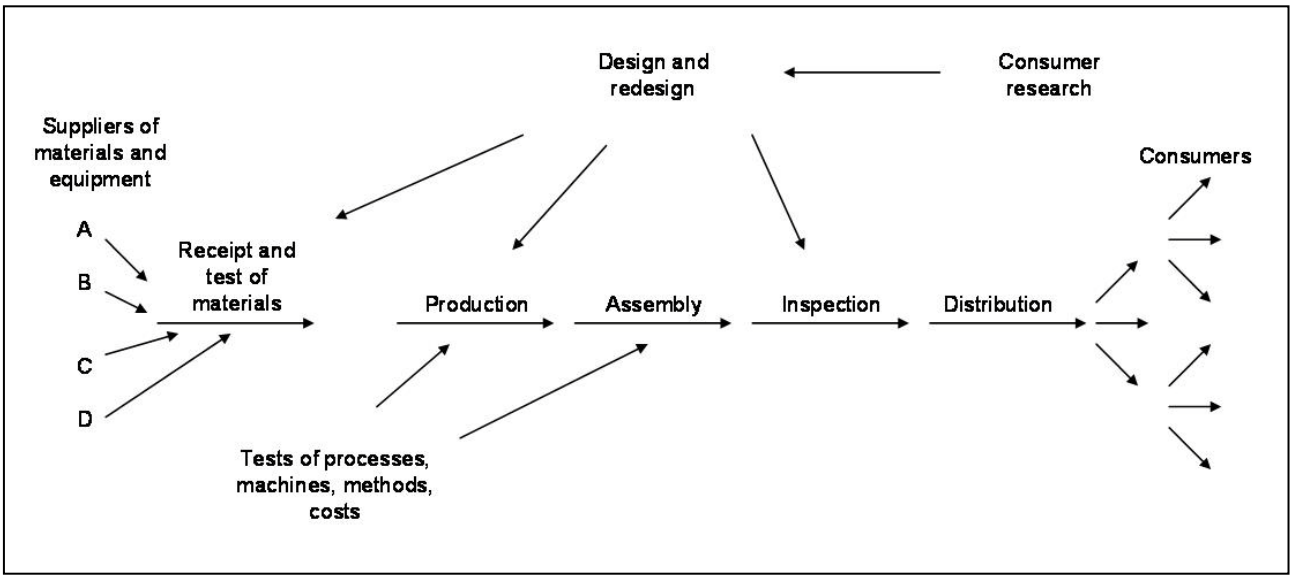

Figure 3: Deming's famous "Fig 1 diagram"
Production viewed as a system" (Deming 1982 p4)

Counter-intuitive truths

When one learns how to apply this key Deming insight (study organisations as systems), certain counter-intuitive truths are discovered. The industrialisation of services is the result of the management of workers' activity which, as we have already discussed, is based on the assumption that activity equals cost. Moving work to call centres, the separation of front-office tasks from the back-office 'factory', the specialisation of tasks and the standardisation of work are all management activities driven by this basic belief in the need to manage activity as cost. Paradoxically, one discovers that the consequence of service managers' focus on costs is that they inadvertently drive costs up: the number of steps it takes for a customer to get their demand satisfied increases, with each unnecessary step adding extra costs to the organisation and causing greater customer dissatisfaction (the "unknown and unknowable" costs Deming referred to in his book review).

Paradoxically, one discovers that the consequence of … focus on costs is that they inadvertently drive costs up

The process of realisation that comes with the discovery of such counter-intuitive truths marks the first step for service managers towards what Argyris and Schön call 'double-loop learning'(Argyris and Schön 1974). Double-loop learning goes further than single-loop learning by reshaping

the patterns of thinking and behaviour which govern why actions are taken (see Fig 4).

We believe that double-loop learning is a necessary condition for the development of what Senge called 'generative learning' and thus essential in the progression towards becoming a 'learning organization'.

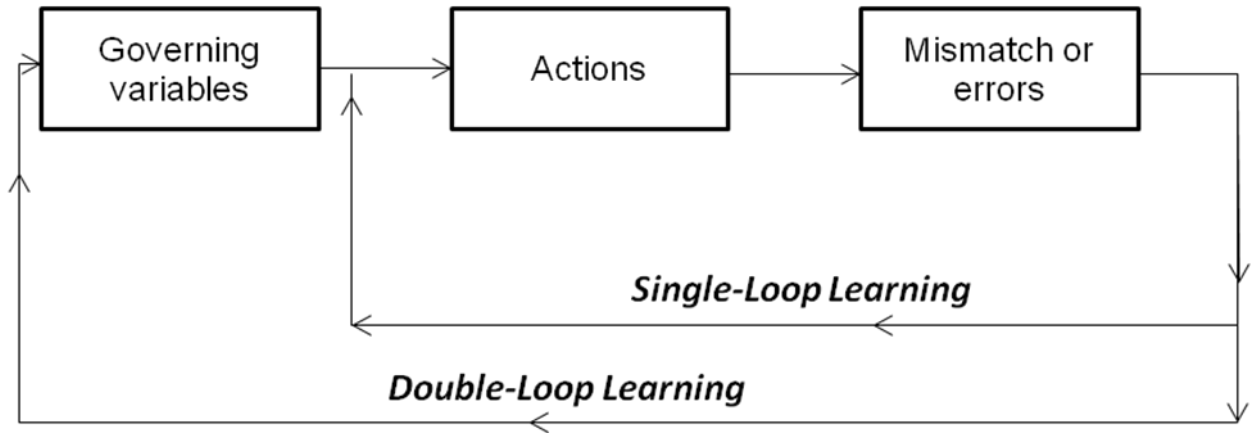

Fig 4 Double-loop learning (from Argyris 1990 p94)

… managers must study their workplace and understand the underlying causes of the problems that they have, instead of jumping to their well trodden, 'core paradigm'-based solutions

For double-loop learning to take place, managers must study their workplace and understand the underlying causes of the problems that they have, instead of jumping to their well trodden, 'core paradigm'-based solutions. Only in this way can the 'governing variables' behind their actions be surfaced and subsequently altered.

Managers find that studying services as systems often reveals other similar counter-intuitive truths:

Demand is the greatest lever for improvement

By measuring the type and frequency of demands into a service, one can start to understand how a service is currently performing. In service organisations, there are two types of demand: value demand and 'failure demand'. Failure demand is "*demand caused by a failure to do something or do something right for the custome*r" (Seddon 2003 p26).

The industrialisation of services creates failure demand; often failure demand into services can run as high as 80% or more of the total demand. It is understood that things will always go wrong. Understanding

what is going wrong predictably leads to productive action – only predictable failure demand is preventable (Seddon 2009).

Studying value demand enables services to be designed from the users' point of view, enabling the user to 'pull value' – to get what they want. In that way, service improves as costs fall.

It is the system that accounts for performance

It is as Deming taught: 95% of variation in performance is due to the system (Deming 1982). This shows the futility of managing workers' activity and re-focuses management on their responsibility to design a system that delivers what customers need.

95% of variation in performance is due to the system (Deming 1982). This shows the futility of managing workers' activity

Any failure to absorb variety will drive up costs

An important feature of transactional services is the variety of demands they experience from their customers. Front-office/back-office splits (the common practice of separating the customer-facing part of an organisation from its back-office functions such as HR or IT departments in order to run the back-office like a production-line), specialisation of work and standardisation of work are all tactics which prevent services from absorbing variety and thus implementing these measures drives up overall costs (Middleton 2010).

Systems thinkers set out to design a system to absorb the variety of customer demands. The correct approach is to train workers against demand, to put them in control of their work – doing it as well as improving it – and to design management roles that are complementary to the work, where action is required on the system.

Argyris and Schön's concepts of single- and double-loop learning explain how a command and control outlook prevents managers from learning and improving

What can be done to create learning organizations?

Returning to the question of how we create more of Senge's 'learning organizations', it is our contention that it is the command and control 'prevailing system of management' which prevents organisations from creating generative learning. Senge's work does not tackle the subject of how to overcome these dominant command and control management assumptions. Argyris and Schön's concepts of single- and double-loop learning explain how a command and control outlook prevents managers

from learning and improving. Distinguishing between single- and double-loop learning, Argyris explains that:

"Single-loop learning occurs when matches are created, or when mismatches are corrected by changing actions. Double-loop learning occurs when mismatches are corrected by first examining and altering the governing variables and then the actions."
(Argyris 1999 p68)

Command and control managers are trapped in the single-loop, never questioning their faulty governing variables. Systems thinking allows for double-loop learning.

Helpfully, Argyris has also written about how to practically intervene to create double-loop learning:
"Research on intervention suggests that it is possible to help individuals learn new theories-in-use and to create new learning systems. The intervention requires the creation of a dialectical learning process where the participants can continually compare their theories-in-use, and the learning system in which they are embedded, with alternative models. This requires that interventionists make available alternative models with significantly different governing values and behavioural strategies." (Argyris 1999, p90)

By recognising that there is a system of interaction which underpins one's actions, it is possible to change and in the process become more open and self-aware. Seddon and Caulkin describe this process as the need to 'unlearn' before one can 'learn' the new way that a system should work, in an 'emergent, adaptive' approach to change.

"Systems thinking is only truly learned by doing, by action learning: it is only by doing that managers can unlearn, can find out for themselves where their current beliefs about the design and management of work are flawed

"Systems thinking is only truly learned by doing, by action learning: it is only by doing that managers can unlearn, can find out for themselves where their current beliefs about the design and management of work are flawed, in order to put into place something that works systematically better, and can systemically be further improved" (Seddon and Caulkin 2007)

Elsewhere, Seddon has written about the practical method for studying and then redesigning a service (Seddon 2003). It is the authors' belief

that attempts to create learning organisations which do not challenge the status quo of command and control will prevent the double-loop, generative learning which is an essential ingredient for continuous improvement: it is necessary for managers to unlearn before being able to learn a better way.

The link between Thinking, System and Performance

Within all organisations, we posit that there is a systemic relationship between the underlying thinking of the managers, the ability of the system to improve and performance to the end user. The 'thinking' of managers, as architects of their organisational systems, needs to be capable of double-loop learning if the goal of creating a learning organization is to be achieved (as illustrated in figure 5).

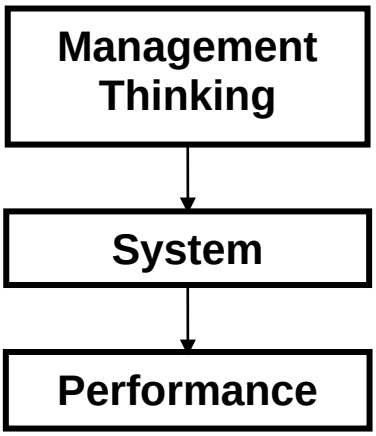

Fig 5: The relationship between the thinking of management, the system and its performance (Seddon 2003 p10)

In this analysis, it is critical that managers are able to make the transition from the prevailing system of management to systems thinking. The assumptions of the command and control logic remain deeply ingrained within Western management culture, developed as they were to solve the problems of the early pioneers of mass production. In modern service organisations, we no longer face the same problems that these solutions were created to solve (Seddon 2003). The basic precepts of command and control have remained unquestioned whilst the underlying paradigm has outlived its usefulness. The problem is not a general problem of culture, but more specifically is one of management thinking. In order to change this mindset, managers must learn to study their organisation as a system, and to understand the true nature of the problems facing them.

In order to change this mindset, managers must learn to study their organisation as a system

A systems archetype for a learning organization

In keeping with Senge's ideas about archetypes, the authors have proposed a systems archetype for transactional service organisations which can be contrasted with the command and control factory archetype in Fig 2.

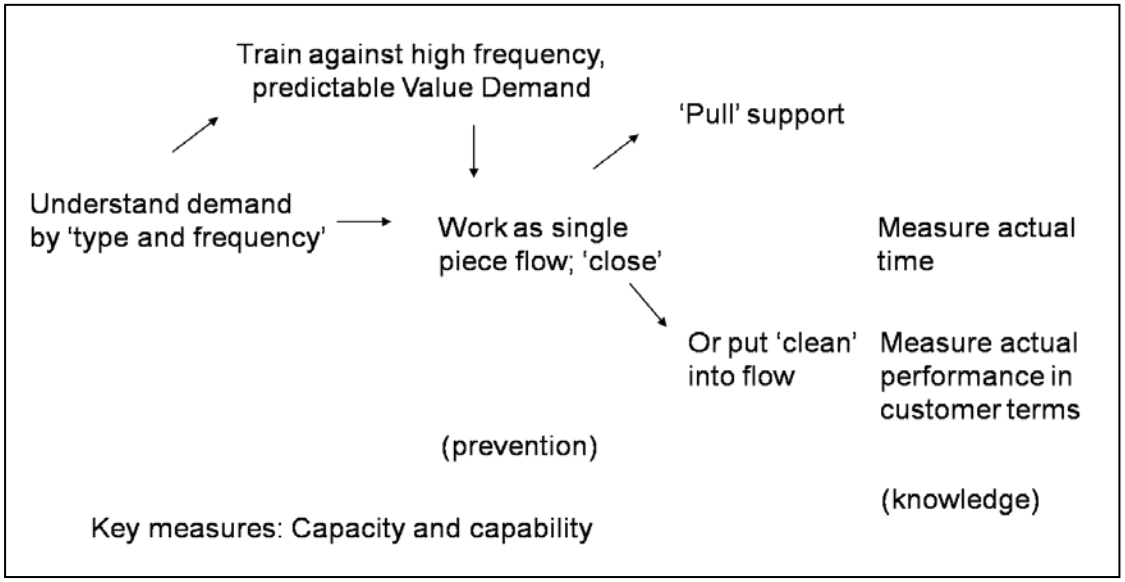

Fig 6: The systems archetype for transactional service systems (Seddon, O'Donovan and Zokaei 2010)

By understanding the demands that arrive at the organisation from customers, it is possible to train workers against the high frequency, predictable value demands (things we know we are going to get a lot of) that are hitting the system. The consequences are shortened training times (for example from eight weeks to two weeks in financial services) and more productive employment of the worker. When the worker receives a customer demand for which he or she is not trained, the required expertise is 'pulled' as needed. In this way worker training is directly related to the requirements of the work. The worker aims to achieve single piece flow (to deal with each demand as it enters the system right through to resolution for the customer, before beginning with another demand) or, if the work has to be handed on to a flow, then the worker is focussed on passing it 'clean': it must be in such a state that the next person has everything they need to take the next step. Workers are allowed to develop measures which relate to the customer's purpose and given control over them (one-stop capability, measures of end-to-end flow) and they consequently have the latitude to experiment with and improve the work design.

Training workers against demand and ensuring they are responsible for what they do is preventative (the better alternative to inspection for compliance with command and control targets and specifications). All arbitrary measures (standard times, cost, targets, standards) are removed from the system and instead real measures are used to help managers and workers alike understand and improve the work. It is better to know the actual time it takes to complete transactions as 'one-stop'; this improves resource planning. Similarly it is better to know the true experience of the customer for any work that goes through a flow (end-to-end time or on-time-as-required) in order to improve the flow and, consequently, reduce costs.

There are many published examples of these principles in use including ODPM (2005), Jackson, Johnstone and Seddon (2007), Pyke (2008), McQuade (2008), Middleton (2010) and Zokaei et al (2010). The examples documented in these studies show that it is possible to create genuinely generative learning organizations.

Conclusion

"… the key to the creation of learning organisations comes from enabling managers to "shift their minds'

At its heart, the above systems archetype (Fig 6) is concerned with designing against demand, managing value rather than cost and genuinely generating organisational learning. This is in contrast with the actions represented in the command and control service management archetype, mired as it is in dealing with the old 'core paradigm' problems. We would conclude by reiterating that the key to the creation of learning organisations comes from enabling managers to 'shift their minds' – Senge's 'metanoia' put into practice. Our argument is that Deming's statements in his 1990 review of Senge's work continue to hold true: it is the dominance of the command and control management thinking which, 20 years on, still prevails and prevents the development of more generative learning. It is only by studying an organisation as a system and creating double-loop learning that we might finally see Senge's 'learning organizations' stop being the exceptional and instead become the norm.

Bibliography

Argyris C 1990 'Overcoming Organisational Defences: Facilitating Organisational Learning' Prentice-Hall: New Jersey, US

Argyris C 1999 'On Organisational Learning' Blackwell Publishing: London

Argyris, C and Schön, D 1974 ‘Theory in practice: Increasing professional effectiveness’ Jossey-Bass: San Francisco

Chandler AD 1977 ‘The Visible Hand’ Belknap Press: London

Deming W E 1982 ‘Out of the Crisis’ MIT Press: Massachusetts

Ford, H 2003 ‘Today and Tomorrow’ Productivity Press. Cambridge, MA. First published 1926.

Fortune 3/7/1989, quoted in Senge, P 1990 ‘The Leader’s New Work: Building Learning Organizations’ Sloan Management Review, Fall 1990, Vol 32, no 1

Jackson, M, Johnstone, N and Seddon, J 2007 ‘Evaluating Systems Thinking in Housing’ Journal of the Operational Research Society no 59, 186–197

McQuade, D 2008 ‘Leading Lean Action to Transform Housing Services’ in Public Money and Management Vol 28 no 1

Office of the Deputy Prime Minister (ODPM) 2005 ‘A Systematic Approach to Service Improvement Evaluating Systems Thinking in Housing’ ODPM publications: London.

Pyke, W 2008 ‘Is performance personal or in the system? ’ Management Services, Winter 2008, Vol. 52 Issue 4, p40-47

Scholtes, PR 1998 ‘The leader's handbook: making things happen, getting things done’ McGraw-Hill, London

Seddon J 2003 ‘Freedom from Command and Control’ Vanguard Press: Buckingham

Seddon J 2008 ‘Systems Thinking and the Public Sector’ Triarchy; Axminster

Seddon, J 2009 ‘Failure Demand – from the horse’s mouth’ Customer Strategy Issue 1, Vol 2 Winter 2009 pp 33-34

Seddon J, O’Donovan B and Zokaei 2010 ‘Rethinking Lean Service’ Chapter for Warwick Business School textbook (forthcoming)

Seddon J and Caulkin S 2007 ‘Systems thinking, lean production and action learning’ in Action Learning Research and Practice Vol 4 No.1 April 2007, special issue: ‘Lean Thinking and Action Learning.’

Senge, P 2006 ‘The Fifth Discipline’ Random House Business Books.

Senge, P 1990 ‘The Leader’s New Work: Building Learning Organizations’ Sloan Management Review, Fall 1990, Vol 32, no 1

Taylor: FW 1998 ‘The Principles of Scientific Management’ Dover Publications: New York. First published in 1911

Zokaei Z, Elias S, O’Donovan B, Samuel D, Evans B and Goodfellow J 2010 ‘Lean and Systems Thinking in the Public Sector in Wales’ Lean Enterprise Research Centre report for the Wales Audit Office, Cardiff University

Biographical Note

John Seddon is an occupational psychologist who began his career researching the reasons for failures of major change programmes. Based on what he learned he developed his own methods for change, which he describes as a combination of systems thinking - how the work works - and intervention theory - how to change it. He is a Visiting Professor at Cardiff and Derby Universities and author of 'Freedom from Command and Control' (2003). Email: John@vanguardconsult.co.uk

Brendan O'Donovan is Head of Research at Vanguard Consulting, and has recently completed an MSc in Operations Management at Cardiff University. Email: Brendan@vanguardconsult.co.uk