CHANGE, COMPLEXITY AND ORGANISATIONAL LEARNING:

MANAGEMENT RESOURCES FOR THE NEXT MILLENNIUM

by
David Wasdell

PREFACE

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David Wasdell
Meridian Programme
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INTRODUCTION

The task of enterprise management evolves as the rate of change accelerates from the imperceptible incrementalism of near-stasis, through the conditions of fast but smooth and predictable flow, to the turbulent edge of standing waves and the tumbling chaos of white water. When the rate of change is insignificant, management has the luxury of being able to plan ahead with confidence and to fine-tune the processes and systems of the organisation for optimum performance. Resistance to change and the perseverance of traditional ways of working may be high, but they do not threaten the survival of the firm nor undermine its ability to sustain its competitive position in the market place. Apart from a very few cloistered islands of stability, those conditions no longer apply. Management of continuous change is the order of the day. Unfortunately, even that will not be sufficient for the disorder of tomorrow.

As change processes accelerate and break down into turbulence, so the time-frame of predictability shrinks. Flexibility, adaptability, fast reaction speeds, real-time management and the capacity to sustain proactive creativity under inherently unstable and unpredictable conditions, become the necessary criteria of survival. Not that the change process is uniform. It can vary dramatically within even quite small organisations, across time, in different locations and in differing technological and task environments.

Transition is driven by a tranche of convergent factors. There is the increasing globalisation and interdependence of world markets. Rapidation of research and development is fuelled by the continuing exponential expansion of computing power, leading in turn to exponential rates of innovation in technological and information-based systems. The explosive development of the Internet and the emergence of the digital economy are beginning to add powerful catalytic momentum to an inherently turbulent field. What is likely to be the last doubling of world population is already having a major impact on issues of resource management, pollution control and environmental change. Climatic shifts stemming from the effects of global warming have increasingly profound

implications for many areas of the world. In these conditions political and social instability increase, as do the pressures of population movement driven by economic and survival needs and exacerbated by religious, ethnic and military dynamics. To these must also be added the effects of turbulence in world financial systems operating in that shadowy boundary between order and chaos which is the domain of the emergent science of complexity.

This is an arena in which organisational learning comes into its own.

THE EMERGENT CULTURE OF ORGANISATIONAL LEARNING

The future quality of working life will largely be determined by the capacity of management to initiate and lead the evolution of more and more effective processes of learning within the organisations for which they have responsibility. Beyond the agony and guilt of downsizing, beyond the alienation of business process re-engineering and beyond the manipulation of consultation lies the necessity of learning together to do what we do together in ways which can enable us to survive together, maybe even thrive together, in a rapidly changing and uncertain world. So much depends on the meaning of 'we'. The rougher the sea, the more we jettison any who have neither the power, the authority, the skills, the resources or the right connections to command a place on board. 'We' have no responsibility for those who find themselves outside the boat. Economic triage applies in conditions of economic war. In contrast to that set of values, one element of the emergent culture of organisational learning is the recognition that 'we' is comprehensively inclusive. The complex, interconnected web of organisations is the system by which the whole society strives together to survive together and maybe even thrive together. That society of interdependent stakeholders includes the holding environment and reaches forward in time to include multiple generations of the as yet unborn whose voice has no power to influence the stock market, but whose future quality of (working) life may depend on decisions made in the cut and thrust of today's competitive market place. In the ultimate analysis, the company is for people, not for profit.

The understanding of the nature of organisational learning has evolved dramatically over the last few years. It started with employee education programmes which have now expanded to the point where some multi-national organisations sponsor their own in-house universities. Life-long learning no longer applies only to employees but has come to embrace every level of management. The next major development made the leap from individual

learning to corporate, systemic or company-wide learning in which the organisation as a whole instituted procedures for examining every aspect of every level of its behaviour with a view to continuous improvement. In this first generation learning system, operational procedures are subject to single-loop learning. The result is greater adaptability to change and a commitment to total quality management, while retaining traditional learning methods.

The second generation of organisational learning added another level to the learning system. Here the learning methods employed were themselves seen as operational procedures in their own right and subjected to examination and continuous improvement. Double-loop learning began to come into its own offering the possibility of relearning how to learn at both individual and corporate levels. Double-loop learning provides much more powerful ways of responding to rapid change and introduces the corporate flexibility vital for survival in the modern world.

Post-modern complexity and the anticipated turbulence of tomorrow are already driving the evolution of the next generation of learning system. Triple-loop learning addresses the learning-to-learn protocols of the double-loop system and transforms them. The end result is significant acceleration in the change-handling capacity of the organisation. The higher the rate and complexity of change in the environment of the enterprise, the higher the order of learning system is required to sustain the performance of the enterprise. If the rate of organisational learning matches the rate of contextual change, the enterprise will hold its ground. If the rate of organisational learning falls behind the rate of change in the environment, the organisation begins to collapse. On the other hand, an enterprise able to learn and adapt faster than the pace of change around it will forge ahead, innovate and grow.

THE MANAGER AS LEADING LEARNER

It is beginning to be recognised that the management of learning systems goes way beyond the functions of the HRD department. New skills and strategic structures are brought into play. Above all are the significant shifts in leadership style. Managers with high performance records but comparatively poor learning skills may be promoted to positions of high executive responsibility under conditions of slow and stable change. In a context of rapidation and potential turbulence the high-performer, low-learner is a dysfunctional corporate liability. Management must 'walk the talk' of the learning system, leading the learning process by example. Here executive positions will be filled by those who are not only high performers, but also outstanding examples of fast-track learners.

Dynamic conservatism, or active resistance to the implementation of organisational learning, appears to reach a peak during the transition from first-order to second-order learning. The introduction of double-loop systems requires the examination and transformation of our basic learning procedures, both corporate and personal. These are subconscious skills and attitudes which have been laid down in early schooling and during the powerfully impressionable pre-school period of family relationships. Such patterns are often loaded with emotional memory which tends to freeze the behaviour and resist significant change. Transforming these fundamental learning-to-learn patterns often requires elements which have more in common with therapeutic integration, human potential development and neuro-linguistic-programming, than the traditional and familiar curriculum of management training.

The manager as 'leading learner' of the enterprise will be becoming increasingly aware of his or her preferred style of learning with its inherent strengths and weaknesses. Openness to creative feedback and exploration of appropriate experiential learning opportunities will begin to bring other styles on stream. For instance if the dominant style is analytic, verbal and linear, then the development of functions associated with the sub-dominant skills of symbolic imaging, multi-dimensional visualisation and the animation of complex solutions through time will open the doors to levels of integrated cognition essential for the navigation of turbulence. Even more powerful domains of holistic learning involve widening the palette to include the whole range of emotional, sensate and active processes so often 'schooled out of us' in our early education. Learning as co-operative, co-creative team-work rather than isolated, competitive, individual achievement, is an essential characteristic of high-performance teams with any chance of survival in a rapidly changing environment. Last, but not least, is the need to develop increasing awareness of the irrational and unconscious processes which play such a major part, not only in individual behaviour under stress, but also in the complex dynamics of inter-personal, group and organisational relationships which so often govern executive and managerial decision-making.

MARKS OF THE LEARNING ORGANISATION

Distinguishing marks of structure, culture and procedure characterise the learning organisation. The elements will not be uniform across any but the smallest enterprise. The more complex and turbulent the process of change and the more advanced the learning system employed, the more pronounced these distinguishing characteristics will need to be.

Effective two-way communication channels throughout the learning system are essential, though their existence does not guarantee the expression of what needs to be said or the hearing of what is really meant. A top-down, authoritative culture of fear and repression or low levels of commitment and ownership of the enterprise will inhibit communication and damp the learning potential. As learning competence grows, so the 'band width' of the communication channels will widen beyond the written or verbal to include visual images and symbolic, even animated elements. Networked IT stations will be used not only for work but also for feedback, communication and learning. When appropriate, affective and active patterns of communication will be brought into play.

Multiple parallel processing is supported by the establishment of a network of micro-teams, forming a kind of 'super-computer with a human face'. The disaggregation of mass employment in repetitive tasks on a production line into parallel-processing craft teams was established many years ago in the pharmaceutical industry, then in car manufacture and electronics. Today the principle is being applied even more effectively to the 'mind-working' of the information age. Technologically this also reflects the shift from the central main-frame to the distributed power of networked high-performance PC work-stations. The highest levels of task-performance, creativity, innovation and, most importantly, learning are achieved by harnessing the collaborative power of multi-nodal processing. Here the intelligence of each node is catalysed and enhanced by the interactive relationships with other nodes, competing and collaborating towards common objectives. In stark contrast the large, single-centred think-tank approach degrades the intelligent performance of the team well below that of any single individual.

As in modern chip design, redundancy will be built into the learning system in order to sustain optimum performance under the often highly stressful conditions of turbulent change. Again, taking the technological parallel, if the main-frame goes down the whole system is in trouble, but if one PC in a complex net develops a fault, the net performance is virtually undisturbed. Work is quickly redistributed. The multi-nodal network of micro-teams has a very high level of resilience to cope with staff turnover, accident, illness, stress or absence. Moreover, even if one node is unable to handle a particular piece of problem-solving, the chances are that other teams will be approaching the issue in different ways and will rapidly come up with a whole array of creative solutions.

The teams themselves will operate with matrix-style substructures which catalyse and support the creative achievement of every member. Team size and structure are both important in sustaining the highest and most effective levels of

learning. Working triads are increasingly recognised as offering the most creative learning context. On the other hand, many tasks require more skills, resources and expertise than three individuals can encompass. This is where the application of matrix design comes into its own. Ideally three working triads are brought together in a two-dimensional matrix which preserves the creativity of the basic threes but adds the ability to cross-work in inter-triadic nodes, so bringing the resources of the whole team to bear at every point of its work.

The learning organisation is characterised by high levels of both differentiation and integration. If the highest rates of creative learning are to be sustained in parallel-processing micro-teams, then the integration of the set of teams, each with its own matrix-style internal structure, is essential to the performance of the organisation as a whole. Several protocols can be employed. The IT system of the organisation needs to be configured in such a way as to support cross-team learning, feedback, sharing of creative or critical insights, and the achievement of distributed real-time awareness of the state of play in the system as a whole. Mobility of personnel between teams may cause temporary disruption but lead to medium and longer term enhancement of the integrative functions, helping to break down the tendency to develop exclusive and defended group boundaries within the learning system. The deployment of temporary project groups focused on particular issues may draw membership from across the teams, so integrating the problem-solving creativity of the whole organisation around a specific point. When the project group dissolves, members take back into their micro-teams expertise and information gained in the project group, so cross-fertilising the work of the basic team structure. Representatives of the teams can meet informally or in more structured and regular ways to work on issues of inter-team collaboration and integration. Alternatively the whole membership of several teams can be brought together with one member from each team working with their opposite number from each other team to create an inter-team matrix of small groups whose task is to focus on the integrative functions of the learning system.

However it is achieved and fine-tuned, the goal of the learning organisation is to develop, sustain and evolve the most creative possible learning community with an inbuilt capacity for continuous monitoring and improvement of its learning processes at every level from individual to total system. Structures and protocols are necessary but not sufficient characteristics of the learning organisation. They must be complemented by a culture of norms, values and processes, and supported by a quality of human relatedness and personal integration. Without these, structures remain lifeless skeletons, however well-designed they may be.

VALUES OF THE LEARNING PROCESS

'Cultural change' is an often-used phrase with extremely fuzzy content. The nature of the cultural change in evolving a learning organisation is rapidly gaining sharpness and clarity of focus, perhaps best illustrated by a set of contrasts, to which readers may well be able to add their own.

- Instead of seeing the information, skills and experience of others as a competitive threat to status to be put down or diminished, they are viewed as a major resource for learning, to be pooled in collaborative team work.

- Members of a learning organisation will welcome indications of ignorance and the discovery of incompetence, seeing them as the starting point of learning rather than weaknesses to be denied and hidden at all costs.

- Constructive feedback given in an open and non-aggressive way is not seen as an attack or breach of loyalty, but welcomed as an opportunity to improve performance.

- Insecure and heavily defended managers tend to weed out employees with divergent viewpoints and establish uncreative, low-conflict groups with high degrees of conformity and uniformity. Leaders in effective learning systems value and encourage diversity and the expression of differences as essential to a healthy culture of creativity, innovation and risk-taking.

- The formal education system tends to promote and reward the isolated achievement of individualistic competition. The learning organisation will harness and catalyse the power of co-operative learning in community.

- Low level learning systems may expose their operating procedures to scrutiny and continuous qualitative improvement, but tend to cling to the security and safety of old, familiar and often ineffective ways of learning. More advanced learning systems will continuously be seeking to improve the learning processes themselves, so encouraging 'double-loop' learning right across the organisation.

- It is over forty-five years since Kurt Lewin recognised that significant change in human systems exhibiting conditions of dynamic equilibrium, required a strategy of identification and release of constraints, rather than the reinforcement of positive drives. That is an insight which is embedded in the culture of the learning organisation and applied particularly to the introduction of second order or double-loop learning. Learning new ways of

learning often provokes intensely defensive resistance as we cling emotionally to learning habits laid down in very early childhood and reinforced throughout our educational lives.

- Recognising that creativity and high-performance team-work require process skills of personal integration, interpersonal relations and awareness of the unconscious dynamics of groups and systems, the learning organisation will welcome and support learning in this field as well as in the more obviously task-related areas.

The culture can perhaps be summarised as one of openness to the as yet unknown instead of taking refuge in the already familiar, coupled with a corporate commitment to internalising and applying new learning as effectively as possible to every facet of the organisation's life.

RESOURCES FOR ORGANISATIONAL LEARNING

In one form or another, organisational learning is here to stay. It is driven by the realities of accelerating change, technological innovation and increasing global competition. It is also a focal field of resource development and provision. There is hardly a business school or department of management without a cluster of programmes, courses and workshops dealing with the theory and application of organisational learning at every level from Introduction to PhD. No consultant organisation can now afford to ignore the subject or fail to offer its application within its skills portfolio. Organisational learning is the subject of a veritable flood of new books, papers and articles in the professional journals, while national and international workshops, symposia, conferences and congresses are proliferating.

Development in the field is being driven in the USA by Peter Senge's team at the Organisational Learning Center of MIT. On this side of the Atlantic the recently formed European Network for Organisational Learning Development (ENFOLD) is beginning to interrelate academics, researchers, consultants and managers and to catalyse the research, development and application of organisational learning across the continent. It can be reached via the Internet on Website http://www.orglearn.nl. In this country, advanced human relations training, consultancy development, learning systems simulation and 'hands-on' experiential learning about the dynamics of matrix-style organisations is offered by URCHIN (the Unit for Research into Changing Institutions) supported by the resources of the Meridian Programme (the 'Manhattan Project' of the behavioural sciences). This latter initiative was launched some nine years ago at a small intercontinental congress in the former USSR with membership bridging

the east/west divide even before the cold war ended. It has opened up what can only be described as a paradigm shift in our understanding of the psychodynamics of human systems which has immense implications for every aspect of our civilisation (let alone the quality of our working life!) as our learning develops to face the challenges and opportunities of the next millennium.

David Wasdell is the founding director of URCHIN and the international co-ordinator of the Meridian Programme. He consults, trains, facilitates and lectures internationally, specialising in the application and development of advanced learning systems and the psychodynamics of social systems undergoing high stress and rapid change. As well as pioneering the application of matrix design to advanced human relations training and consultancy formation, he is the author of many articles and papers, including *Learning Systems and the Management of Change*. A full list of publications and other resources can be accessed via the web-site: www.meridian.org.uk.