

Is ISO 9000 is worth another look?

Stream
Knowledge Management and the Learning Organisation

Author
Will Pollard

Organisation
Exetreme

Postal Address
5 Park Place
Homefield Road
Exeter
EX1 2RD

Phone
01392 660639

Email
will.pollard@eudoramail.com

Abstract

This paper tries to relate quality issues to the idea of a 'learning organisation' and asks whether the changes in ISO 9000 make it suitable for examination. It starts with the suggestion that not only has 'the learning organisation' been 'hyped' but that 'quality' has suffered from 'knocking copy'. Soft systems methodology is seen as a possible approach to representing quality documents as a mental model from which people can learn.

Some reference is made to the practical background in which these issues have come up, work with litho printing and web sites.

Introduction

This paper has developed from the website <http://www.learn9.net>. This site looks at 'learning with ISO 9000' and has been a way for me to continue a project intended as part of a MAML at Lancaster. At the time (1995) the connection between quality and learning was not obvious so I was not accepted for the course. However a lot of material has appeared on the Lancaster University web site and the structure of the learn9 site attempts to follow the course. The aim is the same as for this paper, to find how learning can happen within a quality system, and to get the interest of people who can help with this. A problem which seems to keep coming up is that people who know about 'learning' seem to keep a distance from formal systems which can be seen to include 'quality'.

I started this interest while working as a Quality Manager for a print company with ISO 9000. I now work mostly with Acrobat, increasingly on web aspects. Extreme offers web design and training and in the case of CEBSS (Centre for Evidence Based Social Services) we have had an involvement in policy discussions on ways to adjust to web possibilities. The paper 'Ways of Working with Web Sites' was written for them without a heavy emphasis on formal quality systems but in a way that could develop if required.

Adobe's framework for 'Network Publishing' helps me to understand some situations over the last fifteen years. I have worked in several other contexts without a formal quality system but the quality framework may make sense of developments around 'Network Publishing', as they become more visible. There is more on this towards the end of the paper

As it happens, there is a discussion around the CEBSS web site that is relevant to quality. There will be a section on this that introduces the main issues without getting into systems or ISO 9000. So you may just want to read that far. The next section though starts with 'hype' for 'the learning organisation' and the dismissal of 'quality' which accompanied it.

Hype

The stream for 'Knowledge Management and the Learning Organisation' starts with the idea that the 'learning organisation' and 'knowledge management' have both received much 'hype'. Not only has 'the learning organisation' been hyped: 'Quality assurance' has been routinely dismissed. *The Learning Company* (1991), for example, includes 'Quality Circles, the search for excellence and so on' as part of the litter of yesterday's 'right answers'. ISO 9000 is shown as from the rational phase of quality in the 1960s.

One mechanism for 'hying' the concept of a 'learning company' has been to use versions of history, which show alternative ideas as from the past. The 1991 book (figure 2.9) shows 'excellence' as a solution to problems from the mid '70s and the 'Learning Company' and 'Total Quality Management' (TQM) as solutions to problems from the mid '80s resulting from questions about morality and spirituality in organisations. Glimpse 95 shows the 'rational' phase of quality as including Japan in the '50s while TQM is seen as part of an integrated phase in the '70s and '80s where quality is a moral issue. Looking at different ideas about quality, it seems more likely that different values coexist over time with varying prominence. The continuing interest in Burrell and Morgan's model of paradigms for the sociology of organisations suggests that the issues they raise relate to long-term situations rather than passing enthusiasms. Usually quality issues are identified as concerned with objective evidence and conformity. Learning may happen in situations requiring change and

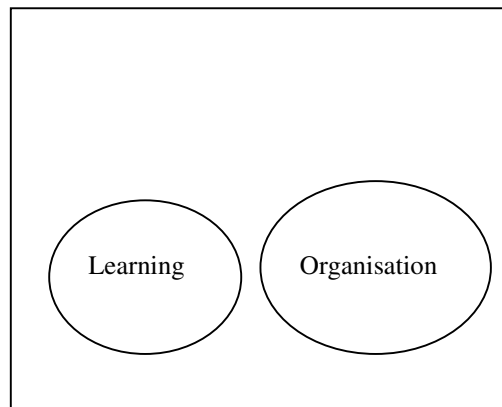
where subjective interpretation is accepted. However, both 'learning' and 'quality' could in theory relate to any of the paradigms described. They may both have similar characteristics in particular organisations at particular times.

By the way, there is an interesting quote in an article 'Theories of the New Capitalism' by Paul Sweezy from *Monthly Review* July/August 1959, reprinted in 'Modern Capitalism and Other Essays'.

'The Corporate Soul. The idea that the managers of the modern corporation no longer seek to maximise profits but in effect act as trustees of the whole community goes back to the well-known work of Berla and Means published in 1932.....In place of the old-fashioned "soulless" corporation we now have the modern "soulful" corporation seeking to do it's best not only for stockholders but also for workers, customers, suppliers, and the general public.'

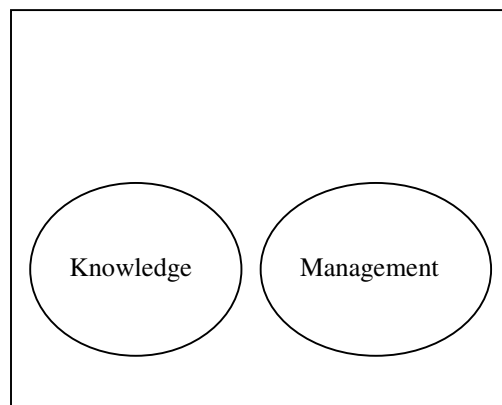
Diagram Attempts

There seems to be a tension between 'Learning' and 'Organisation' as if they are in different spaces. These diagrams are loosely based on Burrell and Morgan and may be developed further. Suggestions for variations are welcome.



“The idea of a learning organisation is an analogy that is in productive tension with itself.”
Victor Newman in *Knowledge Management*

See Note 1 for connections with education



There may be a similar tension for 'Knowledge Management'

And even between Management Learning and Management Science

Relevant quote

'The concept (the learning organisation) can be seen as new in its emphasis on collective rather than individual learning, and as a useful reaction to the possibly regressive practices of total quality management and business practice re-engineering. However, it may fall into the trap of recycling the old, as represented by systems theory and some of the assumptions of humanistic organization development which resurface in some of the more participative aspects of organizational learning thinking'

Intro to section on 'Developments in Design' (Burgoyne, J. and Reynolds, M. 1997)

Is this hype for something else? What follows if something can be represented as 'old' or 'new'? Any paradigm supplies a basis to 'criticise' any other paradigm and this seems fairly stable as a circumstance over time.

Evidence

Stephen Webb has based a critique of evidence based practice in social work on quotes from the CEBSS website. (British Journal of Social Work (2001) 31 57-79. There will soon be a reply from Brian Sheldon. Both texts relate to the discussion between positive and interpretative approaches as discussed in relation to quality and learning. Stephen Webb sees background sources of the evidence-based approach as including "positivistic and empirical science" as well as "government and managerial policies aimed at developing a 'performance culture' by controlling quality..." There is some distancing from post-modern thinkers (p76) although Brian Sheldon uses the 'post-modern' label for the whole approach. The research methods Stephen Webb favours include ethnography, discourse analysis, actor network theory, semiotics and psychoanalysis.

Dismissing all these as post-modern may be a bit precipitous. Brian Sheldon considers "the more 'anthropological' approaches do have a place" though he lists several problems in interpretation. Perhaps the idea of socially constructed knowledge is a useful link between the two positions assuming Goffman is implied by 'anthropology'. Probably social workers consult the website when they have a real issue in mind. They may well discuss the issues with others. Donald Schon (1983, 1987) has studied ways in which professionals move between technical rationality and reflective practice.

In an early footnote to 'Educating the Reflective Practitioner' he writes *'Competent professional practitioners often have the capacity to generate new knowing-in-action through reflection-in-action undertaken in the indeterminate zones of practice. The sources of knowing-in-action include this reflection-in-action and are not limited to research produced by university-based professional schools.'*

There is a basis there for moving between different approaches. Most practitioners are not going to want to stay in indeterminate zones all the time.

A current problem is that CEBSS currently has no developed policy for supporting ways to swap email or support message boards, interactive communities etc. The 'Be-Evidence-Based' site is intended as a source of information. Ways to extend the kinds of discussion possible around this may follow from conferences such as Spotlight and workshops with Stephen Webb. **See Note 2**

Quality Assurance

The evidence-based approach in social services is linked to similar developments in medicine. Diana Sale's book on Quality Assurance is a useful link into more formal quality systems. It concentrates on 'quality assurance' and includes a useful definition.

“Quality assurance is the measurement of the actual level of the service provided plus the efforts to modify when necessary the provision of those services in the light of the results of the measurement.”

Williamson (1979)

The approach to auditing could be used with ISO 9000 and is considered later. Problems identified in using 'total quality' include making sure issues are returned to and getting management attention and support. Maybe ISO9000 would be relevant if System Review was followed including agreement on an audit schedule.

Aspects of Quality

ISO 9000 is intended as part of the movement to quality assurance rather than inspection. Deming is featured in 'The Learning Company' (1997) for his later 'provocative sayings'. Somehow these developed from statistical process control in the 1930s. Peter Drucker (1990) has explained that although SQC often increases the number of machine operators, 'this increase is offset many times over by the sharp drop in the number of non-operators: inspectors, above all, but also the people who do not *do* but *fix*, like repair crews and 'fire fighters' of all kinds.

This distinction from inspection is probably a central claim for all those people working on quality assurance. The issue addressed below is whether ISO 9000 actually works as intended.

The claims of Total Quality have been disputed, for example-

“Although the words total quality have now been borrowed from Japan and widely used in America, they may not have the same meaning. Total quality in the American context too often means impossibly high, theoretical standards foisted by engineers on workers, in short, business as usual.”

The Seven Cultures of Capitalism

Charles Hampden-Turner Fons Trompenaars 1993

See note 3 for more on this area. It is probable that the ideas associated with Deming and Juran were developed in Japan or modified as applied. The history is complicated as both authors changed over time and the interest in the US only came later. It is not obvious that Deming's ideas have actually been tried, for example (1994) - *'abolish incentive pay and pay based on performance. Give everyone a chance to take pride in his work.'*

Problems with ISO 9000

This paper has a more limited scope, mainly within quality assurance. It is concerned with whether ISO 9000 is more or less helpful. There are some well-established criticisms following the first two versions in 1987 and 1995. John Seddon from Vanguard Consulting offers a comprehensive list of issues through publications available through their website. ISO 9000 is too bureaucratic and inhibits change. The origins in the defence industries and engineering have meant that it has little focus on customers and cannot easily be applied for services. Often the difficulty of relating an organisation to the standard in documented form is so great that any change would be hard to consider.

Mark Oostra and Peter Strachan (1999) state in footnote 11 that ISO9001 is primarily meant to support quality assurance. Improvement and renewal are seen as dependent on other approaches. This may be true in practice but there is nothing in the standard to limit the scope of System review. The 2000 revisions are intended to make it easier to relate all quality methods to the basic requirements for quality assurance.

The 2000 revisions will be looked in detail after a section on soft systems that could in theory have been helpful with any version of the standards.

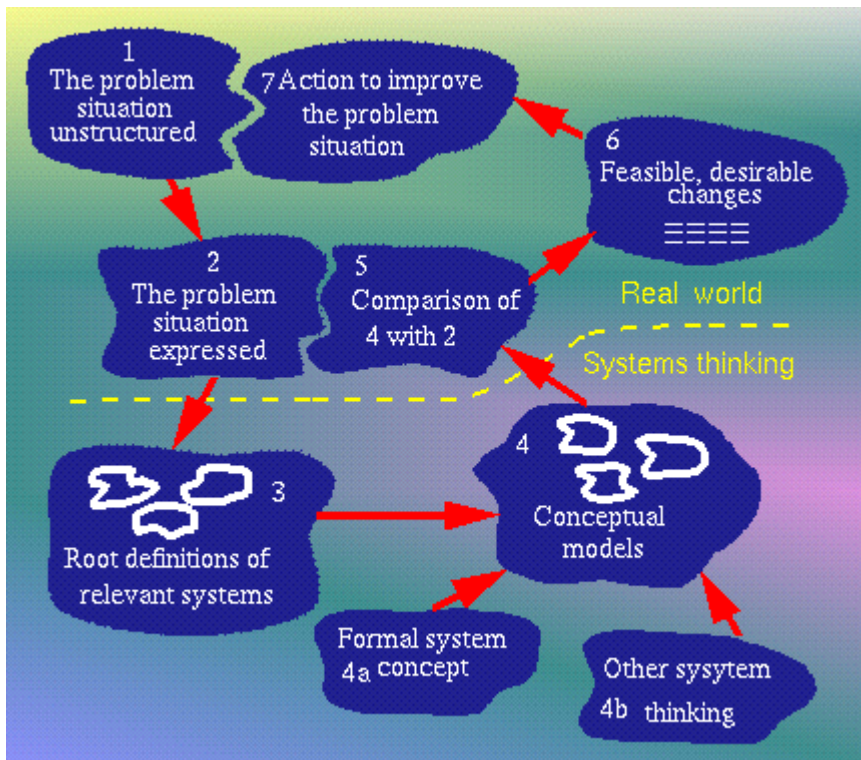
Soft Systems as a Learning Model

The basic idea is to use soft systems methodology with ISO 9000 so that documents are a system model from which to learn.

In 'Soft Systems Methodology in Action' (1990) Peter Checkland and Jim Scholes quote a definition of Soft Systems Methodology from I.von Bulow-

"SSM is a methodology that aims to bring about improvement in areas of social concern by activating in the people involved in the situation a learning cycle which is ideally never-ending. The learning takes place through the iterative process of using systems concepts to reflect upon and debate perceptions of the real world, and again reflecting on the happenings using systems concepts. The reflection and debate is structured by a number of systemic models. These are conceived as holistic ideal types of certain aspects of the problem situation rather than as accounts of it. It is taken for granted that no objective and complete account of a problem situation can be provided."

This is related to figure 2.6 in the book but figure 1.3 is simpler. If you do not have the book consider this diagram below which is copied from the web

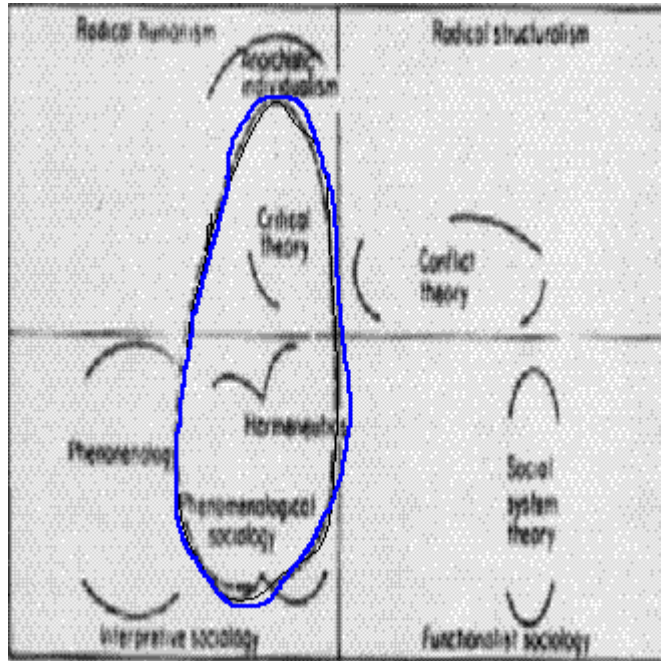


Learning may happen at stage 5, comparison of 4 with 2

A good joke might be-The external auditor says "What you are actually doing bears no relation to the procedures manual at all." The Managing Director then says " Ah no, but the procedures manual is conceived as describing holistic ideal types of certain aspects of the problem situation

rather than as accounts of it. It is taken as given that no objective and complete account of a problem situation can be provided. "However the auditor would not go home at this point. Possible implications for auditing are considered towards the end of the paper.

Diagram scan and sketch



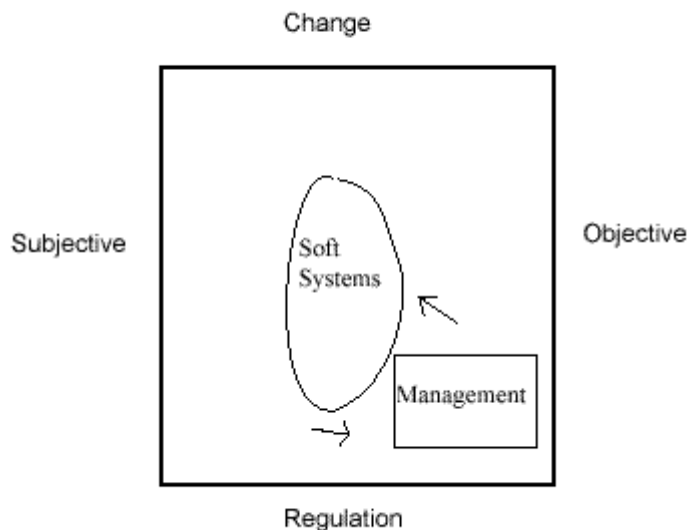
The 1981 diagram shows where Checkland believes that soft systems methodology should be placed. However in the text (pp280-282) he makes it clear that a project may end with a presentation to management in positive terms.

'The social theory implicit in soft systems methodology....would lie in the left-hand quadrants with hermeneutics and phenomenology, although the position would not be too far left of the centre line because the methodology will over a period of time yield a picture of the common structurings which characterise the social collectivities within which it works.'.....' the extension of the area towards the 'radical change' axis will be limited by the desire to achieve action in the real world; in practice, defining changes which are 'culturally feasible' has led to rather conservative use of the methodology but this is a matter of practice so far, rather than principle'.

Later work on Information Systems with Sue Holwell seems to go further in accepting subjective meanings for an information system to function. In 'Information, Systems, and Information Systems' pp 82-84 they discuss similar issues without mentioning paradigms. However the distinction between a conventional organisation model and a richer picture is related to work by Tonnies (Community and Association 1955 / Geminschaft und Gesellschaft 1887).

The two pictures are not seen as alternatives. "... rather the enriched picture includes the simpler one, which is a special case of it. In principle, the multiple ways or thinking about an organisation, its context and its activity could in particular circumstances collapse into a unitary view, the accommodations could become a consensus and the managing of multiple relationships could reduce to decision making in rational pursuit of declared goals.'

This scenario is another way to move back from interpretation to a model making sense to management. Soft systems methodology is a useful model for quality management in working with descriptions of systems to improve understanding and effectiveness. One attempt to sketch where this seems to be resulted in this, with the arrows implying a return back to 'objective regulation'.



The approach needs further clarification. In the Preface to 'Information, Systems and Information Systems' they write-
 'We are trying to develop a coherent and defensible concept of information systems which matches experience; it could perhaps open the way for professional philosophers to contribute their kind of scrupulous intellectual agonising to the subject'.

See note three. Improvement opportunity to get help from philosophers on phenomenology.

This scope may seem too limited for some aspects of learning theory. Alessia Contu (1999) implies that the most interesting ideas are associated with the sociology of radical change rather than the sociology of order. This paper starts with ISO9000, not even a 'post-bureaucratic form of organisation' such as TQM or 'excellence'. Any mechanism to re-examine ISO9000 could be positive.

Another Look at ISO 9000 after the 2000 revisions

The period following the revisions in 2000 is a useful time to look at issues around 'quality' and 'learning'. The new version is beginning to be implemented and there is some feedback on how it works in practice. The rationale for ISO 9000 now claims to reflect a 'process' model and to link to a cycle of 'plan-do-check-act'. There is an apparent acceptance for less paperwork and an emphasis on customer focus and involvement of management.

There are two standards - ISO 9001 is on Requirements and ISO 9004 is a 'guideline for performance improvements', apparently a guide to the requirements but for the sake of argument can actually be seen as a description of a way of working round them. The discussion on paradigms above has been fairly loose but the description of positivist and phenomenological approaches to research design in 'Management Research - an introduction' could be related quite closely to ways of working with each standard. The external audit would formally be to the Requirements standard but the guide gives scope for defence when objective conformity evidence is lacking.

The new version of the requirements has fewer main clauses under five headings.

1. There has to be a formal statement of the quality system, which can be seen as a document or a systems model.
2. There is management responsibility and also
3. resource management.
4. Product or service realisation is described as a process or set of processes.
5. There is measurement and analysis for improvement.

There is reduced requirement for documentation if it can be shown that people have knowledge. Digital documentation is encouraged.

The process emphasis is a basis for systems thinking. The approach used is similar to that for Environmental Management (ISO 14001:1996) and for Health and Safety (BS8800: 1996). This helps to develop familiarity with the way of working. Oostra and Strachan's (1999) workshops were based on environmental systems and it seems likely that learning methods could develop more readily than with quality. For individuals the issues seem to make more sense.

It is hard to demonstrate the claims above about the relation between 9001 and 9004 without quoting extensively from a heavily copyrighted source. The official explanation is that 'ISO 9004 is recommended as a guide for organisations whose top management wishes to move beyond the requirements of ISO 9001, in pursuit of continual improvement of performance. However, it is not intended for certification or for contractual purposes.'

(ISO 9000 is a guide to fundamentals and vocabulary)

If you get access to the standards you can see that the guidance ranges far beyond the requirements on issues such as 'People' or 'Work environment'. Actually the words 'human resources' are used in the requirements, the heading 'people' for the guidance.

Selecting five words for the purpose of review and comment, 'creative work methods' and 'social interaction' are not obviously demonstrated through objective evidence.

Headings in the guidance for which there seems to be no equivalent in the requirements include

6.5 Information

6.6 Suppliers and Partnerships

6.7 Natural Resources

6.8 Financial Resources

Each of these areas is to be viewed with 'a factual approach to decision making', which may not be the only option. This is one of eight principles in the guidance, not the requirements. The others are-

- Customer focus
- Leadership
- Involvement of people
- Process approach
- System approach to management
- Continual improvement
- Mutually beneficial supplier relationships

The Plan-Do-Check-Act cycle is shown as part of the Requirements but without much explanation. The effectiveness of the cycle depends on involvement by senior management. Deming(1994) attributes the cycle to Shewart in the '30s so it has a long period of development. Juran's experience was significant when Japanese managers wanted to apply a quality approach to companies as a whole. See 'A History of Managing for Quality' articles on Japan and USA.

The bad news is that 'involvement of top management' is one area in which things may be going slowly in some instances. Reports in *Quality World* (Daniel, F.J. 2001) suggest that the requirement for CEO involvement to be demonstrated will only result in more work for quality professionals. Reference is made to BSI's 2000 client survey in which one comment was 'For goodness sake, do not go and see top management first.'

Most research though suggests that this is a crucial issue. The same is true for other projects such as Investors in People (Alker, A. 1999 p12). Oostra and Strachan (1999) assert that 'review' is 'the component of the management system that is the least developed'. The standards 'do not require that improvement or renewal actually take place.' This was written before the 2000 revisions but it remains to be seen how much will change. Using ISO 9004 to build on ISO9001 should be possible if people want to do it

Double Loop Learning

This follows the description by Argyris and Schon (1978), in the chapter 'What is an organisation that it may learn?' My impression is that they do cover learning in organisations as well as individuals but are somewhat downbeat about it, which may explain why there is sometimes the impression that they don't describe a 'learning organisation' (Contu, A. 1999). The model for double-loop learning is not the same as Glimpse 58 in *The Learning Company* (1991), showing a POW! As everyone works at process management. It probably is more usual that different types of learning happen at different levels of an organisation. Possibly it would involve the same people at different times and in different roles.

Discussion on Argyris and Schon in the *Learning Company* (1997) includes a quote-

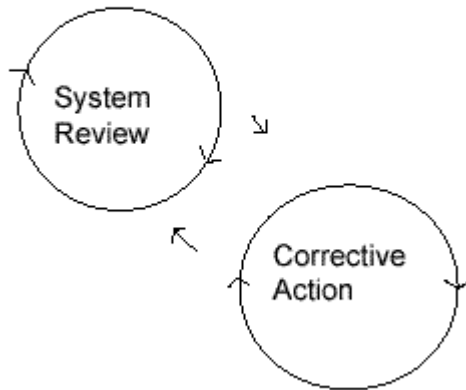
'We have yet to establish, in a full and sustained example, the feasibility of an O-II (double-loop) organisation, nor are we aware of anyone else having done so.'

The last paragraph of '*The Reflective Practitioner*' "calls for an 'action science' which seeks to make what some of us do on rare occasions into

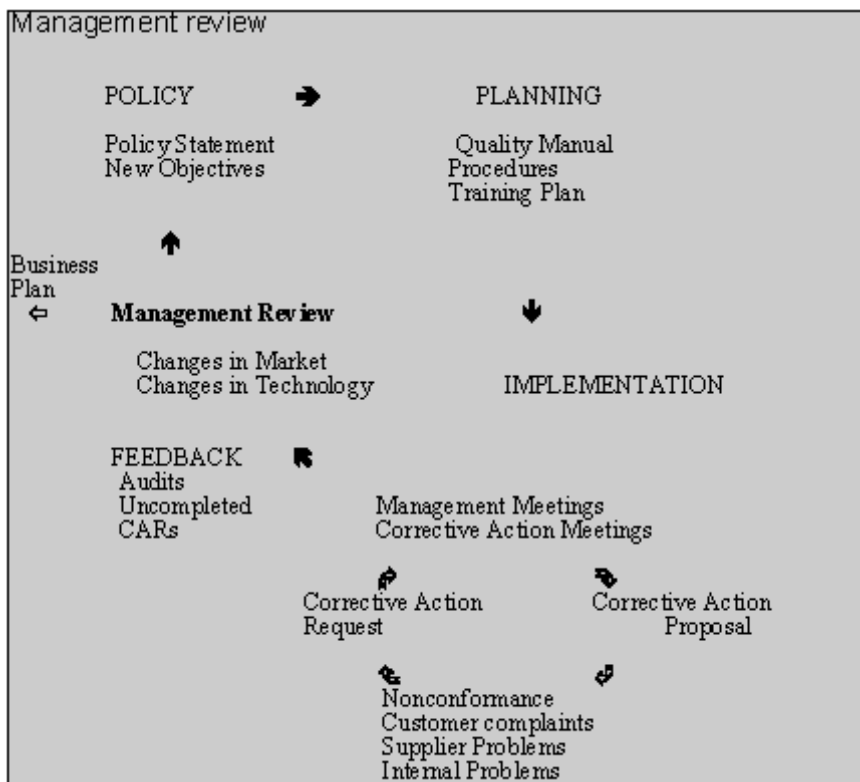
a dominant pattern of practice". The conclusion to the second version of *Organisational Learning* is not very different to the above. This may not be very optimistic, but then again it is not hype.

To demonstrate a possibility, here is an attempt at a diagram that shows how double-loop learning could fit with ISO 900

Double Loop Learning?



The diagram below comes from an earlier attempt and shows more detail This diagram was actually done with the old version of ISO 9000 but should be easier to work with the new.



Meetings

There are three meetings where learning might happen and where the Quality Representative is involved-

- the System Review where the management consider information and review quality policy
- external audit and communication audit results to management
- corrective action meetings in various forms

Possibly these could be looked at using actor network theory but I don't know enough about it.

See note 5

Each of these situations requires some method to allow for learning within a situation producing evidence. Diana N.T. Sale (2000) describes an approach to auditing with major involvement from the people concerned. This includes agreement on the scope and the standard required. An ISO 9000 system would be more formalised but would benefit from comparison with what is described as a 'clinical audit'.

Peter Cockman, Bill Evans and Peter Reynolds have updated their book *Consulting for Real People*, partly because they are getting interest from managers as well as 'people who facilitate change without formal authority'. The leadership style is seen as 'client-centred leadership'. For auditing styles to change possibly requires such a change in management attitudes. Audits probably end with a list of corrective actions. The issues are around how they are arrived at and whether anything than happens.

Possible conclusion

Quality systems do have a formal purpose for improvement. This may not involve learning but at least there is a benefit in examining where this would be possible. The scope is within the stable world imagined by most management with only occasional ventures into somewhere more subjective. There are many thousands of people trying to work with such a system so it is worth starting a discussion on how theories of a learning organisation would relate to this.

The tenth survey (available from the ISO website) shows a global total of 405,631 certificates. Interestingly the UK total only increased by 25 between December 1999 and 2000. the figure for China was 10,548. This may reflect a decline in UK confidence in ISO 9000 or just an association with changing levels of manufacturing.

Issues of general interest include how to get certification, how to get benefit from this or avoid the downside, and how to learn from just looking at the standard anyway. This discussion needs to look at the different agents involved and the problems associated with adapting to written procedures.

ISO 9000 is only one approach and is not suited for all situations. There was a recent case study published (James, P. 2001) on the print company where I used to work on ISO 9000. They have used benchmarking to come to terms with decline in sales of business forms and a switch to digital printing. This was not possible to do through ISO 9000.

One of the disappointing things about the IQA article on the introduction of ISO9000 : 2000 is the report that it is still hard to relate to. 'Making It applicable To My Company' is still the top problem, as it

was with the earlier version. It is still a problem to use the model as something to think with.

Meanwhile the pace of technical change requires something extremely flexible if companies can change fast enough to survive. The Adobe claims about Network Publishing seem to imply that a new wave will soon follow the '80s desk-top publishing and '90s publishing on the web. The workflow will involve a supply chain on the web connected to all forms of media. Possibly 'agile manufacturing' (Maskell. B.H. late '90s) could cope with this, as it seems to draw on a wide range of sources. This is one area for further study. Further information on Network Publishing will be available during this week from Seybold Seminars.

Management Learning

The conclusion above is fairly limited given the wider concerns of Management Learning. It seems from the book 'Management Learning' (1997) that discussion has moved on from a disappointment with the effectiveness of management education to wider political concerns.

'Management education . . . has not in any obvious or clear-cut way revolutionised the social and economic benefits derived from managed organisations.'

Section titled 'Reconstruction: Looking Forward.'

Some of the social benefits imagined could be outside the scope of ISO 9000 but the economic case for ideas about 'learning' could only benefit from a connection with ideas about 'quality'.

Improvement Opportunities

Note 1 Learning

There seems to be a more general problem in that academics and teachers reject quality methods as 'inspection', the main form they experience. The actual case for quality assurance may be useful for them. 'The evils of grading are intensified by forced ranking, only so many Grade A permitted' - Deming, *The New Economics*. Based on reading *The Guardian* there seems to be an idea that audit should be less frequent for sites that are ok. This suggests there is no improvement needed or likely from audit. Also audit would always be seen as inspection. This is a set of issues worth discussing.

Note 2 CEBSS Web Site

Following Spotlight Conference it should be possible to check out the extent of common ground between CEBSS and the people who use the website. 'The Psychology of Incompetence' shows that Brian Sheldon favours examining practice in each situation. 'Critical evaluation' may mean different things to different people. *Reflective Learning for Social Work* seems to concentrate on formal courses but some of the ideas relate to supporting people in practice. The 'Be-Evidence-Based' website should be available by late 2001 so forms of collaboration could be considered for later.

Note 3 What happened in '50s Japan?

It is complicated how ideas on SPC from the '30s were interpreted in Japan in the '50s and USA in the '80s maybe. There is much dispute as to what Juran and Deming represent, and also if their ideas have actually been followed. Getting into this would take up too much space but could be followed up elsewhere.

Note 4 Phenomenology

People from the Philosophy Department at Lancaster have contributed to a book on 'Understanding Phenomenology'. While some of this book can be understood, it would also be useful to get them to comment on issues around soft systems, learning and quality. As the Environment standards are related to those on Quality maybe the environmental applications would be more likely to get their attention.

Note 5 Actor Network Theory

This is on Stephen Webb's list of suggested research methods and I find that parts of a previous paper can be understood (Fox, S. 1999) (Maybe this is because references to Foucault are explained rather than assuming prior knowledge (Contu, A. 1999). Several points come out of this-

a) There is a section on 'immutable mobiles', characteristics of graphics linked to discussion of Elizabeth Eisenstein's book on the *Printing Press as an Agent of Change* (1979). I did a module on Telematics in Exeter that included use of 'Concept Maps'. It would be interesting to explore how far 'concept maps' meet the description of 'immutable mobiles'. How is the effect of the printing press continued by html and pdf?

b) Callon (1986) describes stages through which researchers can promote ideas. It seems too easy in that there is no allowance for the ideas to be modified as contested. The 'communities of practice' could be from overlapping interests. Current examples include the Adobe promotion of 'Network Publishing' and the draft standards on auditing for quality and environmental standards. 'Network Publishing' will take shape as people other than Adobe make their own sense of it and suggest other connections. The auditing standards seem largely based on 'objective' traditions while the environmental approach has allowed more subjective aspects to be considered. Actual auditing practice will be developed in discussion with clients.

c) Possibly Actor network Theory could be a basis for fictional dramatic situations. I have tried previously to produce diagrams that might work as concept maps. (task3.pdf ImplementingICT.pdf). The second one includes variations on a Burrell and Morgan diagram that could be put on different levels of a 3D box. People at Barb Design in Exeter are experimenting with Adobe Atmosphere and could possibly create this along with avatars for example for Donald Schon and Peter Checkland moving between different levels/subjects.

Problematic Event #1 the Barb design site www.barb-design.com has so much Flash I can't find the 3D.

References

Websites

Adobe

<http://www.adobe.com>

BSI

<http://www.bsi-global.com/ISO9000Revisions2000/Overview/index.xalter>

CEBSS

<http://www.ex.ac.uk/cebss>

Exetreme

<http://www.exetreme.com>

IQA (Institute of Quality Assurance)

<http://www.iqa.org/>

ISO

<http://www.iso.ch/iso/en/iso9000-14000/index.html>

Lancaster Management Learning

<http://www.lums.lancs.ac.uk/manlearn>

Lancaster Management Science

<http://www.lums.lancs.ac.uk/mansci>

Learning with ISO9000

<http://www.learn9.net>

Network Publishing at Seybold Seminars

<http://www.seyboldseminars.com>

Soft Systems Diagram

http://www.sfc.keio.ac.jp/~masanao/Mosaic_data/ssm.html

Vanguard

<http://www.lean-service.com>

PDF / HTML from the web (can be printed)

From the Lancaster Management Learning site, PDF versions of papers from 3rd International conference on "Organisational Learning" Lancaster June 1999

Alker, A., *Investors in People: the Experience of Members of the Employment Relationship*

Contu, A. *The Odd Couple - Discussing the Partnership between Situated Learning Theory and Organisational Learning Literature.*

Fox, S. *Communities of Practice, Foucault and Actor Network Theory*

Oostra, M. *Environmental, Quality, and Working conditions Management: An Organisational Learning and Systemic Management Approach*

From Maskell website www.maskell.com

Maskell, B.H., *An Introduction to Agile Manufacturing*

From www.learn9.net

Pollard, W. *Ways of Working with Web Sites* Exeter, Exetreme

Print

- Argyris, C. and Schon D.A. (1978) *Organisational Learning: A Theory of Action Perspective*
Reading, MA: Addison-Wesley
- Burgoyne, J. and Reynolds, M. (1997) *Management Learning* London, Sage
- Burrell, G. and Morgan M. (1979) *Sociological Paradigms and Organisational Analysis*
1994 Reprint Aldershot, Arena
- Checkland, P. (1981) *Systems Thinking, Systems Practice* Chichester, John Wiley
- Checkland, P. and Scholes, J. (1990) *Soft Systems Methodology in Action* Chichester, John Wiley
- Checkland, P. and Holwell, S. (1998) *Information, Systems and Information Systems*
Chichester, John Wiley
- Cockman, P., Evans, B. and Reynolds, P. (1999) *Consulting for Real People*
Maidenhead, McGraw-Hill
- Daniel, F.J. (2001) 'ISO 9000:2001' - Direct Hit?' *Quality World* (Sept p28) London, IQA
- Deming, E.D. (1994) *The New Economics* Cambridge MA, MIT CAES
(available from British Deming Association 01722 412138)
- Easterby Smith, M., Thorpe R., and Lowe, A. (1991) *Management Research: An Introduction*
London, Sage
- Gould, N. and Taylor I. (1996) *Reflective Learning for Social Work* Aldershot, Arena
- Hammond, M., Howarth, J. and Keat, R. (1991) *Understanding Phenomenology* Oxford, Blackwell
- James, P. (2001) 'Measuring Up' *Printweek* (14 Sept p34) London, Haymarket
- Juran, J.M. (1995) (editor) *A History of Managing for Quality* Milwaukee WI, ASQC Quality Press
- Pedlar, M., Burgoyne J., and Boydell T. (1991) *The Learning Company*, London McGraw Hill
- Pedlar, M., Burgoyne J., and Boydell T. (1997) *The Learning Company*, London McGraw Hill
- Pisano, G.P. and Hayes, R.H. (editors) *Manufacturing Renaissance* Boston MA, HBS
- Sale, D.N.T. (2000) *Quality Assurance* Basingstoke, Macmillan
- Schon D.A. (1983) *The Reflective Practitioner* (1995 reprint Aldershot, UK Arena)
- Schon D.A. (1987) *Educating the Reflective Practitioner* San Francisco Jossey Bass
- Sheldon, B. (1987) 'The Psychology of Incompetence' in *After Beckford*, Egham,
Department of Social Policy and Social Science, Royal Holloway and Bedford New College
- Sheldon, B. (2001) *The Validity of Evidence-Based Practice in Social Work: A Reply to Stephen Webb*
British Journal of Social Work forthcoming
- Taylor, D. (2000) 'ISO900: 2000 Starts Here' *Business Standards* (Dec p10) London, BSI
- Webb, S. (2001) *Some Considerations on the Validity of Evidence-based Practice in Social Work*
British Journal of Social Work 31, 57-79

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