

The cultural aspects of change for sustainable development

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Abstract

Achieving sustainable development is possibly the largest change challenge in human history. This article argues that success almost certainly requires managing change at the level of shared underlying assumptions, the so-called *second level of learning*. The relevance of cultural analysis to change at this level is demonstrated.

A five level model of culture is introduced, providing a framework for the investigation of this field. Experience from a simulation exercise is introduced and is shown to be relevant to the investigation of culture.

Several cultural blockages to change for sustainable development are identified. These include behaviour that is unnecessarily competitive, insular and secretive and that suppresses moves towards useful co-operation. A number of limiting assumptions underpin these behaviours - for instance that participants are powerless to change the outcome of the exercise, that success is determined competitively, that there is an inevitable trade-off between financial success and wider system health and that there will be adequate warning of problems.

The paper concludes by suggesting some ways of leading change at the second level in this context.

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1. Introduction

“Can we move nations and people in the direction of sustainability? Such a move would be a modification of society comparable in scale to only two other changes: the Agricultural Revolution of the late Neolithic and the Industrial Revolution of the past two centuries. These revolutions were gradual, spontaneous and largely unconscious. This one will have to be a fully conscious operation, guided by the best foresight that science can provide.... If we actually do it, the undertaking will be absolutely unique in humanity’s stay on the Earth”.

This reflection by William D. Ruckelshaus¹ (quoted in Meadows et al, 1992, p 218) is a stark reminder of the scale of the challenge of sustainable development. Recent work by the author² showed that this view is widely shared among leading UK practitioners in the field of sustainable development. A more formal study (Macnaghten et al, 1995) suggests that the population at large is largely in agreement³.

Starting from this position, the first section of the paper demonstrates the relevance of cultural analysis to change for sustainable development.

The second section introduces a five level approach to cultural analysis.

The third section describes Fishbanks Ltd., a simulation addressing sustainable development issues. It describes the typical course of such a simulation and identifies some of the factors that seem to make a difference to the outcome.

The fourth section uses the experience of the game and the author's experience in the field of sustainable development to identify some cultural issues that may impede our progress on sustainable development. While neither claiming to be complete, nor definitive, the analysis does identify important aspects of culture that merit attention by anybody that wishes to contribute towards this transition.

The final section looks briefly at some of the options for working with cultural issues in this context.

2. Relevance of cultural analysis to change for sustainable development

There is a great deal of theory on change at the individual and organisational level. (Argyris and Schon, 1996, Torbert and Fisher, 1995, Lievegoed, 1993, Wilber, 1995 & 1996⁴). Kuhn (1962) gives a well-known and highly influential account of transformation within the scientific community.

Briefly, a human being, a scientific community or an organisation typically works within a framework of assumptions that serve it well in its everyday tasks. Because they are normally taken for granted, a useful shorthand develops. For instance, colleagues do not need to explain why a high level of debt is a problem - they can

¹ Formerly EPA Administrator in the USA under Presidents Nixon and Reagan.

² UK Round Table for Sustainable Development, 1998

³ In the county of Lancashire, UK.

⁴ Wilber, 1995 and Torbert & Fisher, 1995 both give extensive references to the literature on developmental stages.

get on with reducing it. Progress within a developmental stage is usually continuous improvement that does not challenge these assumptions.

Transformational change occurs when critical underpinning assumptions are undermined and replaced by new, more helpful ones. Kuhn (1962) gives a series of accounts of this happening in the physical sciences⁵. To undermine these key assumptions or *paradigms* is a radical act: the way that scientists see the world changes totally. Torbert (1991) describes how the individual is unable to solve key problems until a stage transition has been made and goes into considerable detail on how to assist these transitions to happen.

This process is often uncomfortable. Critical problems don't go away no matter how hard one tries. This is because corrective actions will often be driven by the assumptions that need to change. Influential people often resist abandoning key assumptions. A *try-harder* pathology can easily develop. There are often attempts to downplay the significance of the presenting problems. Breakthroughs to new and more helpful sets of assumptions often happen outside the mainstream and then face rejection by it.

The parallel with the challenge of sustainable development is clear. The presenting problems are huge. We are stuck *trying-harder*⁶. Day to day politics continues without significant reference to the issue. Powerful groups, particularly in America, deny the validity of the problems.

It appears likely that it is worth exploring the so-called *second level of learning* - learning at the level of key assumptions⁷ (Bateson, 1964, Argyris and Schon, 1996) in looking for a way forward. This is the domain of cultural analysis.

3. A five level model of culture

A useful multi-layered approach to analysing culture in depth has been developed by the Bath Consultancy Group (Hawkins, 1997)⁸.

Level one - artefacts. These are physical manifestations of underlying assumptions, signalling how we are expected to behave and what is seen as important - the lay out of buildings and offices, status symbols, dress codes, policies framed on the walls, photographs, even the organisation chart. In a fire service headquarters, for instance, all the photographs were either of men in uniform or of blazing buildings. Easy to deduce that the service had some difficulties valuing fire prevention!

Level two - patterns of behaviour. How do people get on around here? How do you get something done? How is conflict handled? What happens when something goes wrong? How do people keep in touch? In a manufacturing organisation, for instance,

⁵ For instance with the Michelson-Morley experiments and other events that eventually undermined Newtonian physics

⁶ See, for instance, Klaus Topfer's recent comments on progress on global warming: *UN Report warns of world's unsustainable future*, The Independent, London, 16 September 1999.

⁷ The key underlying assumptions have been described as the core of a culture (Schein, 1992).

⁸ It owes a great deal to Schein, 1992 and to Bateson, 1964. In an earlier incarnation, the author assisted with the development of this model.

the way to get things done was to find (if necessary even quietly create) a crisis, argue for resources and then use them to the original end. This rather harmed an organisational quality initiative!

These two levels of culture can be directly observed but are usually manifestations of deeper levels. These need to be accessed for significant change to be possible.

*Level three - **mindset**.* This includes the culture's values, its core assumptions, its theories in use, etc. This level is often regarded⁹ as the most important, for it generates behaviours. In a hospital, the common mindset included "*if something goes wrong, it must be somebody's fault*". Perhaps helpful in encouraging people to care for patients, it made it hard for them to accept failure and led to inappropriate blaming behaviours.

*Level four - **motivational roots**.* This is where people find meaning in their work together, being where the organisation's mission or even spiritual purpose (Hawkins, 1991) is located. Motivational roots are often carried by the older members of the organisation. In a large computer company, for instance, younger managers shared little at this level. A older manager smiled: "*We thought we could change the world!*" This organisation needed to reinterpret its mission for a world that had changed.

*Level five - **emotional ground**.* This is the feeling base of the culture, often barely articulate. Feelings of anger or depression are common, less commonly feelings of euphoria and excitement. The apparently negative feelings can be a result of unprocessed reactions to major changes (Kubler-Ross, 1973). They can also be a consequence of the work of the organisation itself (Hawkins and Shohet, 1989). The helping professions often experience burnout at the emotional ground.

Taking these five levels together, there can be significant inter-relationships. What is done at one level may well have consequences at a different level. If we do anything important, it is almost certain to have such repercussions. Changes need to be worked through at several levels and blockages can very possibly surface at any of them.

4. Using simulations to access culture

I have played *Fishbanks Ltd*¹⁰, a simple but powerful sustainability simulation, many times with MBA students and others. Participants are divided into fishing fleets. Their task is to maximise their assets over the life of the game. To do this they have to catch and sell fish. They are briefed on their roles in the fleets and are also given a lot of information about the two fishing systems in which they are operating.

In a typical game, participants expand quickly into the more productive fishery. Catches are good and fleets grow. The catch levels off but this warning sign is ignored. Occasionally there are moves towards co-operation at this stage but usually too little is proposed and even this is not accepted by most participants. The next year the catch collapses. The pattern is then repeated in the second fishery.

⁹ For instance by Schein (1992)

¹⁰ The game was developed under the supervision of Professor Dennis Meadows at the University of New Hampshire. It is based on observed interrelationships. It can be purchased at low cost and is excellently supported for use with groups using personal computers.

Over the years that I have played this game I have changed my facilitation style to reduce my own influence on the outcome. For instance, I share more information and sometimes give clues about what a good outcome would be. I will sometimes refuse to accept a move, inviting the group to think again. I am more explicit about the group's need both to optimise and to avoid disaster. None of these changes has had the slightest effect on the outcome, as far as I can tell.

Even knowing the numerical 'answer' does not guarantee success. It is often the case that a participant or sub-group works it out - this is never enough. On one occasion the whole group came to discover it before the game even started: it crashed the fishstocks even more dramatically than most groups!

What characterises the relatively successful outcomes is a change to the way that sub-groups interact. This may be by setting up a separate strategy sub-group, by appointing a process observer, by monitoring the moves of other groups and challenging them, by asking why a sub-group is behaving as it is and engaging with it. The more successful such moves are, the better the results. Almost invariably one person has to take some personal risk (in terms of credibility etc). For this to help, the other participants in their turn need to recognise and respond to the call to change. This is quite rare: only once in my experience has a group come close to maximising assets and on only about 10% of occasions does a group do respectably well.

After the game participants come to appreciate that their own experience is likely to give clues as to what is causing some of the world's problems. We then go on to look at the cultural patterns that lay behind the group's behaviour.

5. Our culture and sustainable development

My observations about patterns of behaviour and mindset have been discussed and developed with many of the groups that have played the game. I will add some rather more subjective observations about what may be going on at the emotional ground. I have not looked in detail at the artefacts or motivational roots.

5.1 Patterns of behaviour

- i) Little co-operation or communication between sub-groups.* Almost all the activity takes place within sub groups. Little or none takes place at the level of the wider system. This blocks the development of a coherent framework within which groups can operate effectively.
- ii) People who suggest co-operation are ridiculed or ignored.* Ridicule is often a sign that a cultural norm has been breached.
- iii) Mental models are only rarely shared.* This prevents people challenging assumptions and correcting errors and holds back the group from assessing its own implicit strategy.
- iv) People only rarely ask for help when they do not understand.* The question "Does anyone understand what is going on here, because I don't?" would probably avert the crash more times than not. People who speak almost invariably do so from a position of already knowing what is going on, but by then it is usually too late.

- v) *Participants follow the emergent behaviour of the other groups.* Very frequently, even groups that begin cautiously will be affected by the behaviour of other groups. A dominant style quickly emerges and is rarely challenged.
- vi) *Actions are predominantly short-term.* Participants spend more time trying to predict when the crash will occur for tactical reasons than trying to avoid it.

5.2 Mindset

- i) *Success means beating the other fleets.* Participants usually want to see who has 'won'. It can be a profound moment when they realise that this assumption has conditioned much of their behaviour.
- ii) *Doing well financially is at odds with the health of the fisheries.* Participants assume that the fisheries are bound to collapse and so their actions become very short-term. The opposite assumption - that financial success is inextricably linked to the health of the fisheries - is much more useful. Assets can only be maximised over the simulation's duration by adopting this assumption *and by encouraging others to adopt it as well.*
- iii) *Information and ideas should not be shared.* Information is rarely shared with other participants, even when the sustainable fleet is being exceeded. Indeed sometimes the people holding this information exceed the overall sustainable fleet size in their own fleet, driven by assumption ii) above. Consequences are that incorrect assumptions by other fleets are never corrected and no informed discussions ever take place about the consequences of overall group behaviour on the fisheries.
- iv) *When a problem becomes apparent, there will be time to act.* By the time that it is clear that there is a problem, it is already too late for a fully effective response. Maximum catch for the more productive fishery is typically achieved with the fish population already significantly depleted. By the time the first reduction in catch is observed, the population is normally around 15% of its starting level. This is a common feature of systemic problems. Such misleading signals often lead fleets into a fatal increase of effort that completely wipes out remaining stocks. The simulation shows that strategy must be driven by a keen appreciation of the health of the system which produces the operating results, that these results are a very poor indicator of health, and that they therefore need careful interpretation.
- v) *Leadership of the whole system isn't permitted.* Only rarely is an attempt made to initiate discussions across different fleets. Even more rarely do they succeed. As noted, participants often make fun of the initiator, leaving them feeling disempowered by their colleagues, caricatured as slightly idealistic and ridiculous. They rarely try again.
- vi) *It's not our fault that the system is behaving the way that it is, and we are powerless to improve it.* This may be the most pernicious assumption of all. A good result requires that participants accept that they co-create the system of which they are victims. This brings with it a recognition that change is possible and that no-one else can be expected to make it happen.

5.3 Emotional ground

The relative safety of simulations makes them good at revealing behavioural patterns and mindset, but emotions may be less extreme. Experience from the Fishbanks game is enriched by my personal experience as an environmental manager, consultant and campaigner.

- i) *People playing the Fishbanks game are normally very wary* - they tend not to trust the motives of any person who tries to improve the overall situation. This is often a fatal blockage to efforts to improve the situation. This lack of trust is rarely openly acknowledged. People typically want to be seen to be nice, and this stops them from doing the verifying that might be appropriate to build up trust.
- ii) *Feelings of powerlessness are very strong.* Most people feel victims of the situation and this prevents them from being able to do anything much about it.
- iii) *People will often go to considerable lengths to remain powerless.* When action is suggested¹¹ many reasons will normally be given that action is not possible for the group in question and that another group should act. In my opinion this is an unconscious attempt to avoid taking on the burden of leadership in this area.
- iv) *There are very strong feelings under the surface.* For instance strong anger sometimes breaks out. As an example, a showing of a film (about damage being done to Ladakh) to a different MBA group led to a near-riot. The public anger sometimes shown over the export of live animals may be seen as a way in which people are beginning to express their emotions over the wider issue of sustainability.
- v) *These feelings are very often suppressed.* Emotions in this area are often not owned. This makes communication difficult and relationships fragile.

5.4 Some general conclusions

There are clear interrelationships between the levels of culture in these examples. For instance, the feelings of powerlessness might clearly be expected to have an impact at the mindset level ("*Leadership of the whole system isn't permitted*") and would lead to certain patterns of behaviour (staying safe and doomed at the sub-group level, for instance). At the very least, this suggests that some attention should be paid to the deeper levels when considering how to make improvements at the behavioural level, both in the game and - I would suggest - more widely.

6. So what can break the grip of cultural patterns?

The Fishbanks game gives helpful insights into which cultural patterns may be blocking change for sustainable development but it would be fanciful to think that a simulation can give many insights into how to behave on an issue of such scale. Nonetheless, there are a few lessons which it is worth noting:

¹¹ This is a comment from outside the Fishbanks game.

- Spreading information and sharing mental models is helpful even if they are "wrong" - doing so can stimulate others to respond and so can assist group understanding.
- It is unwise to condemn an initiative by another person as foolish. This may be a sign that we are encountering our own internal barriers to change.
- It is not enough to act at the level of one's organisation. It is also necessary to find ways of influencing the larger systems of which it is a part.
- A key assumption which we may need to question is that protecting the environmental and social systems of which we are part is necessarily at odds with our organisation's interests.

Speaking more generally, it is helpful to recognise that this is a huge change challenge and that this almost certainly means change in taken for granted assumptions. Because all of us are part of what is now an increasingly common culture, this applies to each of us to some extent - to me as author of this article as well as to you, the reader, to environmental activists as much as to our political leaders. There is no outside expert to whom we can go for advice - it is up to us. If we think that we have it sorted in our minds, that may be the most dangerous assumption of all.

The act of naming unhelpful assumptions is itself a helpful step. To do so requires us to recognise that they are unhelpful. That means recognising that things are going wrong because of how we think about them, not just because others are irresponsible. This is not easy, particularly where much of political process consists of point scoring. So another seriously unhelpful assumption that we can put aside is the expectation that a good leader will always know the answer.

There are various disciplines that seem helpful. My own preferences are for *Collaborative Inquiry* (Heron, 1996), for the discipline of *dialogue* (see Jaworski, 1996, Bohm and Briggs, 1989) - provided that it is grounded in action - and for the creation of *parallel organisations* - spaces where practitioners with very different viewpoints can step out of role to test assumptions. I also believe that there would be great benefit to creative but disciplined *visioning* - again, provided that this leads to action. Linking these is the discipline of *action inquiry* (Reason 1988). But I also recognise that my own perceptions may need to change.

Widespread change at the second level of learning is required. This requires people to lead such change. To do this requires personal change at still deeper levels and this requires encounter with the emotional ground in its rawest form (Hawkins, 1991, Macy 1983, Bateson 1964). Macy suggests safe ways of doing this. Most usually it takes radical external change - divorce, bereavement, serious illness - to force us into learning at this level. The evidence of the simulation is that we cannot wait until the need to change is inescapable. I believe that those who are capable of leading in this area should now begin to look inwardly and very deeply.

The author

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References:

- Argyris C, Schon D. 1996. *Organizational Learning II: Theory, Method & Practice*; Addison Wesley: Reading, Mass.
- Bateson G. 1964. The Logical Categories of Learning and Communication. In *Steps to an Ecology of Mind*; Bateson G. 1972. Chandler: San Francisco
- Bohm D, Briggs J. 1989. Dialogue as a Path Towards Wholeness: Can Lessons Learned from Subatomic Particles Help Solve Social Problems? *New Age Journal* September/October 1989: pp 113-121.
- Hawkins P. 1991. The Spiritual Dimension of the Learning Organisation. *Management Education and Development* **22**, 3
- Hawkins P. 1997. Organizational Culture: Sailing Between Evangelism and Complexity. *Human Relations* **50**, 4
- Hawkins P, Shohet R. 1989. *Supervision in the Helping Professions*; Open University Press: Buckingham.
- Heron J. 1996. *Co-operative Inquiry: Research into the Human Condition*; Sage: London.
- Jaworski J. 1996. *Synchronicity: The Inner Path of Leadership*; Berrett-Koehler: San Francisco.
- Kubler-Ross E. 1973. *On Death and Dying*; Routledge: London
- Kuhn T. 1962. *The Structure of Scientific Revolutions*; University of Chicago Press. Chicago.
- Lievegoed B. 1993. *Phases: The Spiritual Rhythms of Adult Life*. Anthroposophic Press: London.
- Macnaghten P, Grove-White R, Jacobs M, Wynne B. 1995. *Public Perceptions and Sustainability in Lancashire*; Lancashire County Council: Lancaster.
- Macy J. 1983. *Despair and Personal Power in the Nuclear Age*; New Society Publishers: Philadelphia
- Meadows DH, Meadows DL., Randers J. 1992. *Beyond the Limits*; Earthscan: London
- Reason P. 1988. *Human Inquiry in Action*; Sage: London.
- Schein E. 1992. *Culture and Leadership*; Jossey Bass: San Francisco
- Torbert WR. 1991. *The Power of Balance*; Sage: London
- Torbert WR, Fisher D. 1995. *Personal and Organizational Transformations*; McGraw Hill: Maidenhead
- UK Round Table for Sustainable Development. 1998. *Monitoring and Reporting on Sustainable Development*; UK Round Table: London
- Wilber K. 1995. *Sex, Ecology, Spirituality*; Shambhala: Boston.
- Wilber K. 1996. *A Brief History of Everything*; Newleaf: Dublin..