Working the Boundaries

John Darwin

This paper considers the many boundaries faced by workers in organisations. Two conceptual frameworks are introduced to aid this. The first links complexity theory with characterisations of the organisation as clockwork and snakepit. The second is a framework for change in organisations. These are used to locate a number of methodologies which are informed or enriched by complexity theory. One of these, Immersive Drama, is explored to illustrate and develop the argument.

Introduction

It may be useful to explain the background to the ideas presented in this paper. My original interest in 'working the boundaries' came from the practical experience in the late eighties of developing a number of inter-organisational partnerships in the fields of economic and social regeneration (Darwin 1989). It quickly became apparent that the lessons of management which I had learnt 'on the job' were inadequate for this work, because they provided very limited help in dealing with cross-boundary activity. This led me to explore the use of fuzzy logic as a way of understanding better the interface between organisations, since it was becoming clear that both the boundaries and the work involved were fuzzy. Subsequently, a review of complexity theory brought further help, and also led to exploration of a variety of boundaries within and between organisations, between organisations and their environments, between issues and concerns (often conflicting, sometimes considered in management literature in terms of paradox).

In this paper a number of these issues are reviewed, using three interconnecting realms of thinking. The first is that of philosophy, logic, epistemology, ontology and scientific method. The second is the theory itself developing an understanding of management and organisational dynamics. The third is the practice of management and strategy: here the contribution to be made is by way of examining approaches to practical strategic intervention, which are or can be underpinned by this theory. Incidentally, although the term 'management' is used here, this is primarily for want of a better alternative the concern here is with the practice of managers, consultants (internal and external), specialists and a variety of change agents.

Clockworks, Snakepits and Rainforests

In this section we introduce three approaches to organisational activity; each is characterised as a pattern of four closely interrelated aspects:

- Landscape – what we see
- Mindset – how we think
- Language – what we say
- Toolkit – how we act

The first two approaches derive from Schwartz (1990). One is a 'textbook' organisation, operating like a clock: everybody knows what the organisation is all about and is concerned solely with carrying out its mission; people are basically happy at their work; the level of anxiety is low; people interact with each other in frictionless, mutually supportive cooperation; and if there are any managerial problems at all, these are basically technical problems, easily solved by someone who has the proper skills and knows the correct techniques of management. The other type, the 'snakepit' organisation, is the opposite. Here, everything is always falling apart, and people's main activity is to see that it doesn't fall on them; nobody really knows what is going on, though everyone cares about what is going on because there is danger in not knowing; anxiety and stress are constant companions; and people take little pleasure in dealing with each other, doing so primarily to use others

for their own purposes or because they cannot avoid being so used themselves. Managerial problems here are experienced as intractable, and managers feel that they have done well if they are able to make it through the day.

Schwartz outlined these alternatives to his MBA students, and asked them to indicate which type of organisation more closely approximated the picture of the organisation they knew best. The results were dramatic: virtually all who responded indicated that the snakepit model fit better. Schwartz's further comments are also relevant: he found that, irrespective of this result, his students wanted to know the techniques for managing clockworks. He concluded that the idea of the clockwork organisation had much more than pragmatic significance for them. It was rather an article of faith.

One can put a different slant on this, based on discussions with managers: the clockwork is a form of security. Faced with uncertainty, and the need for 'proven tools and techniques with which to cope', they retreat to the apparent safety of rational analysis-choice-implementation. The clockwork picture is of course derived from the Cartesian-Newtonian Synthesis. It is part of a belief system about what should be, based on the beliefs held about that Synthesis. This is strongly reinforced by the prescriptions on power which are integral to the Synthesis, and give legitimacy to the use of power by managers. (Thus the divide is not as neat as Schwartz's metaphors would suggest - and it has proved important when discussing his approach to emphasise that it serves also as an illustration of the powerful hold which dichotomous thinking has on the Western mind.) This Synthesis has been challenged in a number of fields in the last century and a half, although following Keynes I would argue that this does not imply a change in the belief system. Many of the implications of modern science appear both counter-rational and counter-intuitive, while the Cartesian-Newtonian Synthesis continues to explain perfectly adequately much that we see in every day life.

Enthusiastic advocates of the 'new science' in management frequently adopt an apolitical approach, neglecting many of the implications of power. How realistic is it to expect people to abandon bases of power on the grounds that their scientific perspective is outdated? It would be naive to think that an approach to strategic management integrating new scientific insights will be adopted because it 'makes sense'. Part of the argument about the weakness of the rational approach to management would be a critique of precisely this naiveté - the belief that good rational arguments will prevail, irrespective of people's belief systems and power relationships.

Despite the partial development of alternatives put forward by a number of authors, the clockwork remains so strong that it acts as a fundamental determinant of management and organisational activity. It is an 'image' of the organisation which relates closely to Morgan's 'machine' metaphor (Morgan 1997), and it provides a strong underpinning to concerns about loss of control, about the consequences of 'letting go'. Management control systems are maintained and developed because there is fear of the alternative - of things 'getting out of control' leading to chaos - as well as a desire to maintain control. In the public sector the imperatives of expenditure restraint and public accountability provide powerful arguments for the maintenance of control. Distrust also has empirical support - the reality of abuse following relaxation of monitoring systems, and this again is a particular concern in public bodies (the 'sleaze factor' is only one manifestation of this).

So far we have focused principally on the 'mindset' aspect of Schwarz's metaphors, and it is worth briefly reviewing them in terms of the other three aspects. If we consider the Clockwork, then the landscape is a route-map or plan, detailing as far as possible the past, present and future. It is a landscape of machines, and it has another important element – everything within it has foundations. The Snakepit is in many ways the flip side of the Clockwork – it is one of the reasons managers cling to the latter, because the consequence of not having control is feared to be chaos. The landscape is evoked by its name – a hostile place where few wish to be. The Snakepit embraces characteristics of several of Morgan's (1997) metaphors: the political, the psychic prison, domination, and aspects of the cultural.

The language used in each is illustrated in Table Two. Note that only one word remains the same: 'competitive'. But whereas in the clockwork world this is related to competitive markets, and competition between organisations, in the snakepit it is much more likely to be about competition within organisations, between those struggling for power (or just for survival).

The clockwork toolkit includes many of the concepts, frameworks and tools that have been developed in management over the past half century, for example SWOT, PEST(EL), five force analysis, value chain analysis, mission models, critical success factors, the balanced scorecard, the cultural web, stakeholder analysis, levering and stretching resources, force field analysis, and the organisation life cycle. Stakeholder

analysis is also important in the snakepit toolkit, but here the emphasis is on understanding and being involved in the 'backstage activity.' Survival makes it important to understand the levers of power, and stakeholders' interests and influence. An understanding of defensive routines will help, as will the ability to cope with conflict.

The clockwork and the snakepit can appear as two contrasting alternatives – either/or. This is simplistic. Managers share with many other people the need to be - and be seen to be - rational. But we are all aware of the 'backstage activity' which plays a crucial role in the development and implementation of strategy - power, politics and organisational process. The 'public performance' is rational - the argument that takes place in meetings and committees, the documents that are proposed to justify positions. As Grint argues, a convention of Western thought since the Enlightenment has been that rationality is the means by which individuals are persuaded to execute decisions made by others, or to change their opinion, attitude or behaviour (1995:114). But it is the argument here that both are present in every organisation, and that they are not the only options. The development of this argument begins with a brief discussion of epistemology.

For the purposes of the present discussion I want to identify eight themes in the epistemology and methodology of the Cartesian-Newtonian Synthesis. The first is crisp or two-valued **logic**. One is expected to be logical, although it is rarely explained what this is supposed to mean, and it often appears to be used as a synonym for 'rational'. Closely related to this is the assumption of **linear thinking**, which is to be seen particularly in the models and schemata which characterise much of strategic thinking, from flow diagrams to two-by-two matrices.

Third there is **quantification.** A high premium is put on quantitative methods, especially in decision making. Fourth is **cause and effect**: science involves the search to identify causal links between variables. Fifth, there is **reductionism**, which involves the search for basic elements. Sixth, there is the **split between thinking and doing** - or mind and body - expressed by Taylor in his fourth principle of scientific management. Seventh, there is the concern for **control**, and finally, there is a commitment to **foundationalism**, albeit these days in a modest form.

The epistemology and methodology which inform this paper relate to the above points as follows. First, crisp 'either/or' logic is superseded by fuzzy and four valued logics, leading to a very different view of boundaries, conceptual or otherwise. Second, in place of linear thinking we have thinking that recognises interconnections, feedback loops and multiple causation. Third, quantification has its value, but it is not the case that 'what counts is what can be counted'. Fourth, cause-effect linkages are recognised to be complex. It may be impossible to conclude what causes what: instead the need is to understand and work with the pattern that connects. Fifth, instead of reductionism there is the acceptance of emergence, which again can involve the unpredicted and unexpected. Sixth, the sharp boundary between thinking and doing is challenged, both through a rejection of mind-body duality and through the integration of theory and practice. Seventh, the desire for control is questioned, and seen as frequently counterproductive. Finally, there are no foundations – instead there is a pattern that connects. Associated with this is the argument that knowledge itself can be seen as socially constructed, with language influencing this social construction (von Glasersfeld 1989)

With these in mind, we now turn to the third approach, which draws heavily on complexity theory, and may be called the 'rainforest' (continuing the parallel with Morgan's metaphors, the nearest to this is 'flux and transformation'). Its key characteristics are summarised in Table One, where a comparison is also made with the clockwork and the snakepit.

The landscape of complexity is the rainforest. The mindset might include the following; the word 'might' is used because not all of these would be recognised or accepted by all writers on complexity:

- Accept unpredictability and the likelihood of emergence
- Search for and discover patterns beneath complexity
- Accept fuzziness (and distinguish fuzzy thinking from sloppy thinking!)
- Identify and use both positive and negative feedback
- Recognise the capacity for self-organisation, and the freedom that must be given to facilitate this
- Address the need to develop the organisation's intelligence and ability to generate knowledg
- Recognise codependent arising: the mutually interactive creation of the organisation and its environment
- Accept the need for disruptive action

- Exercise what the poet John Keats called Negative Capability: the ability to be "in uncertainties, mysteries, doubts"

TABLE ONE: COMPARISON		
CLOCKWORK	SNAKEPIT	RAINFOREST
A network of many 'agents' acting in parallel, with many interactions backstage	A network of many 'agents' acting in parallel	
"Adaptively intelligent" – some evolution and learning	"Individually intelligent" - evolution and learning very limited	"Adaptively intelligent" - always evolving and learning
Control centralised or organised	Control may be centralised or organised, but much powerplay takes place backstage	Control highly dispersed
Coherent behaviour in the system arises from required cooperation among the agents	Behaviour in the system (coherent or otherwise) arises from competition and coalition among the agents	Coherent behaviour in the system arises from competition and cooperation among the agents themselves
There is organised evolution, which limits possibilities for emergence and self-organization	There is disorganised evolution, which limits possibilities for emergence and self-organization	There is coevolution, which is a powerful force for emergence and self-organization
Many levels of organization, each a building block to higher levels, with a hierarchical relationship between levels	Many levels of organization, each a building block to higher levels	Many levels of organization, each a building block to higher levels
Limited revision and rearrangement of components through experience	Limited revision and rearrangement of components through experience	Constant revision and rearrangement of components through experience
Anticipates the future through explicit or planned predictions	Anticipates the future through predictions and powerplays	Anticipates the future through implicit predictions
Has limited niches; new opportunities are sometimes created, and the system seeks equilibrium	Has limited niches; new opportunities are sometimes created, and the system tends to disequilibrium	Has many niches; new opportunities are always being created, and the system is always unfolding, never in equilibrium
Functions in a situation of order	Functions in a situation of disorder	Functions best in a situation between order and disorder
Acquires information about its environment and its own interaction with that environment, identifying regularities in that information, condensing these into a kind of 'schema' or model, primarily structured by powerplays	Acquires information about its environment and its own interaction with that environment, identifying regularities in that information, condensing these into a kind of 'schema' or model	

The language may again be compared to that of the clockwork and the snakepit (Table Two); the toolkit we shall explore later. One of the themes frequently stressed in complexity theory is that of boundaries, for example in discussions of 'managing at the edge', or 'the boundary between order and chaos'

TABLE TWO: LANGUAGE

| CLOCKWORK	SNAKEPIT	RAINFOREST
Control	Chaos	Complex
Order	Disorder	Order within chaos
Modern	Postmodern	Constructivist
Objective	Subjective	Interconnected
Realist	Non-realist	Neither
Analytical	Instinctive	Evolving
Safe	Unsafe	Dynamic
Logical	Illogical	Fuzzy logic
Certain	Uncertain	Adaptive
Foundations	No foundations	Web or net
Predictable	Unpredictable	Pattern
One best way	Any way	Multiple approach
Structured	Unstructured	Codetermined
Planned	Unplanned	Memory of the future
Competitive	Competitive	Coevolution

Logics and the Wheel of Change

This discussion of boundaries can be taken further by looking at recent developments in logic. Western thinking has long been dominated by crisp logic, with the result that challenges are usually made in terms of 'Let us replace either-or thinking with both-and thinking' one (see for example Bate 1994, Collins and Porras 1994; Stacey 1996); but this is not a challenge, since it accepts the validity of the underlying approach. This leads to discussions of paradox and the attempt to combine apparently contradictory approaches, such as the classic 'loose-tight'.

The crisp set divides the individuals in a given universe of discourse into two groups: those that are in the set, and those that are not. But many of our concepts do not allow this neat 'logic chopping'. Consider for example the set of dangerous dogs, expensive houses, highly contagious diseases, endangered species, or modest profits. These sets have imprecise boundaries that facilitate gradual transitions from membership to non-membership. We can see the liberating potential of fuzzy logic by recognising that what are often presented as opposites in the management literature (such as decentralisation and centralisation) are intersecting fuzzy sets. Fuzzy boundaries can also be used to help give a better understanding of organisational structures and stakeholders, especially in alliances and joint ventures. It will rarely be necessary to employ the impressive mathematical structures which underpin this theory, but the concepts themselves can be of great value.

Fuzzy logic helps us to recognise the way in which apparently sharp and absolute dichotomies are socially constructed. To date there have been few attempts to employ this approach in management theory. One exception is Grint (1997), who employs fuzzy logic to allow reconsideration of a number of management themes, such as measurement systems. Another is provided by Lerner and Wanat (1983), who have explored the implications for bureaucracy, in particular the practice of categorisation therein. They argue that fuzzy sets allow a more realistic and humane public service, where the need for overt parity leads to the imposition of crisp rules which are also very inflexible. Overtly crisp rules are on occasion subverted by fuzzy interpretations which however remain hidden to those most affected. Overt fuzzy rules might address this problem.

In order to relate these discussions of complexity and logic to the clockwork, the snakepit and the rainforest, I want now to introduce a further simple conceptual framework. The inspiration for this comes from two sources - Janssen's Four Roomed Apartment and Richmond's notion of the 'Energy Wheel' (see Diagram One)

Diagram One: The Energy Wheel and The Four Roomed Apartment
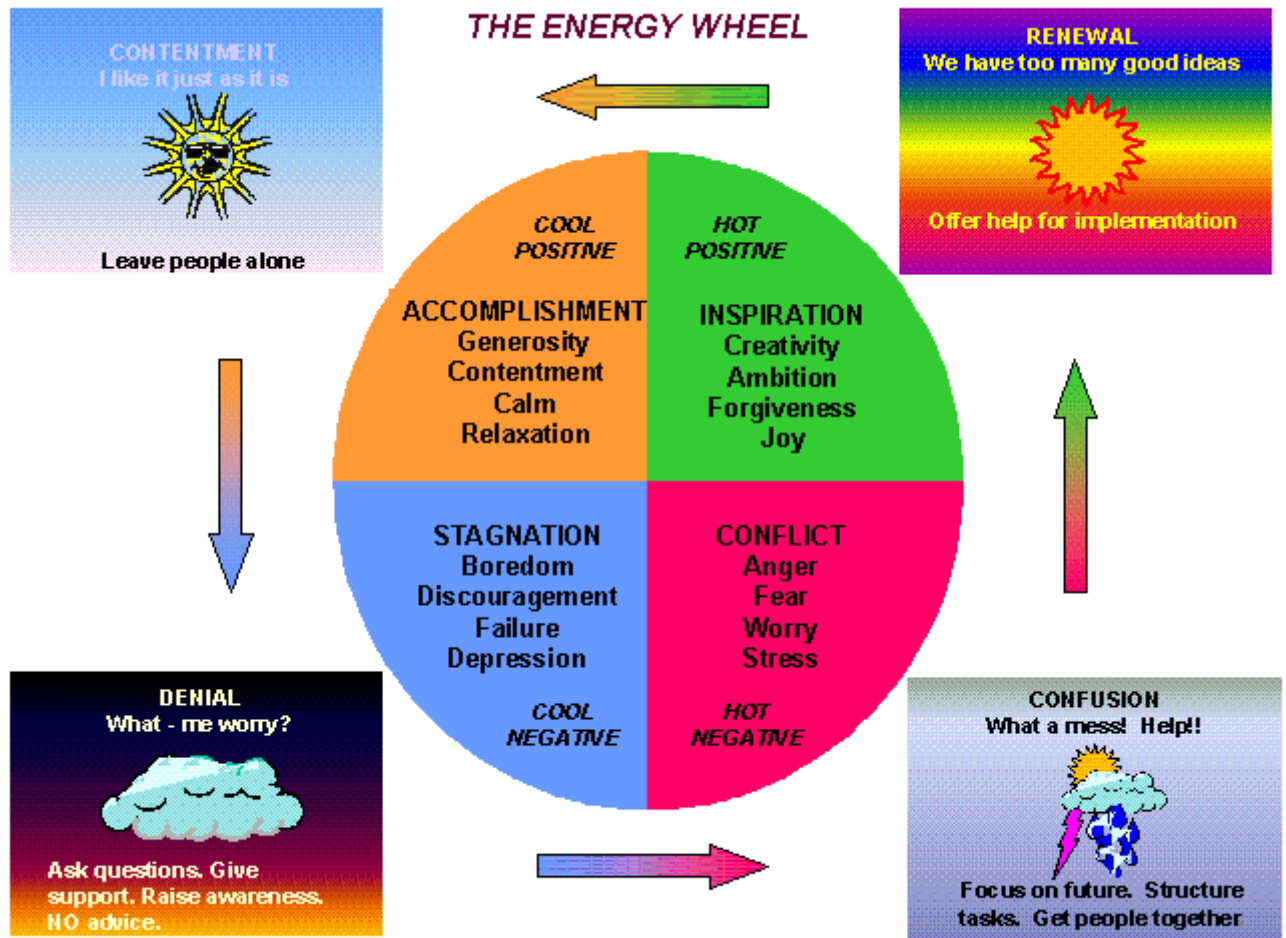
Janssen's metaphor of the four roomed apartment (Janssen 1982; Weisbord and Janoff 1995) informs a view of the change process. He argues that we move from room to room, depending on perceptions, feelings or aspirations triggered by external events. In Contentment we like the status quo. We are seen as – and feel – satisfied, calm and realistic. Any change can move us into Denial where we are perceived as unaware, afraid of change, insensitive – although we may well not (consciously) feel that way. While people are in this room, it may be appropriate to ask them questions and seek to raise awareness – but there is no point in giving advice, since every positive suggestion is likely to be countered with a negative one. We stay here until we own up to fear or anxiety. That moves us through the door into Confusion. Here we are seen as – and feel – different, out of touch, scattered, unsure. Whirling about in Confusion, sorting out bits and pieces of our lives, we eventually open the door to Renewal. Now we are perceived as – and feel – sincere, open, willing to risk.

People in Contentment or Denial are not frozen. There will be triggers that move them at some point. To mobilize energy, we need to be with people in Confusion or Renewal. There is no simple cause-effect relationship here between techniques and transforming systems, or even developing them. The seeds of success are sown in Confusion and sprout in Renewal.

This discussion is enriched by considering Richmond's Energy Wheel (Richmond 1999). This has four sectors which may be loosely linked to the four rooms (Table Three).

| TABLE THREE: THE ENERGY WHEEL AND THE FOUR ROOMED APARTMENT			
SECTOR		ENERGY	ROOM
Cool Positive	Accomplishment	Generosity, Contentment, Calm, Relaxation	Contentment
Cool Negative	Stagnation	Boredom, Discouragement, Failure, Depression	Denial
Hot Negative	Conflict	Anger, Fear, Worry, Stress	Confusion
Hot Positive	Inspiration	Creativity, Ambition, Forgiveness, Joy	Renewal

Janssen speaks of doors between the rooms. Here, we consider instead the idea of fuzzy boundaries, recognising that none of the rooms are self-contained. The final framework – the Wheel of Change - therefore features eight areas, adding the fuzzy boundaries of Decline, Provocation, Awakening and Resolution. To some extent there is a sequence here (anti-clockwise), but this does not preclude other shifts. The wheel serves in part as a 'thermometer' by which to identify the emotional temperature(s) present in the context under consideration.

Onto this Wheel of Change we can now map the clockwork, the snakepit and the rainforest (Diagram Two). All are present in some form or other in each area, each bringing with it the associated landscape, mindset, language and toolkit. It is worth emphasising that this framework is presented as a heuristic - an aid to learning rather than any pretence at accurate description or prescription. One would hardly expect the neatly drawn circles to have an exact counterpart: they serve only to suggest the relative strengths of the clockwork, snakepit and rainforest as we move around the wheel.

Below we explore the practical implications in two of the four boundaries, Awakening and Resolution, where the rainforest is most apparent. This discussion recognises that the approaches informed by complexity theory are much less appropriate, and may indeed be counterproductive, when working the boundaries of Decline and Provocation. In Provocation the snakepit is prominent, and political skills are paramount. This is often an unpleasant boundary in which to work, and the use of complexity insights may be dangerous here, if the assumption is that positive things will always come out of this application.
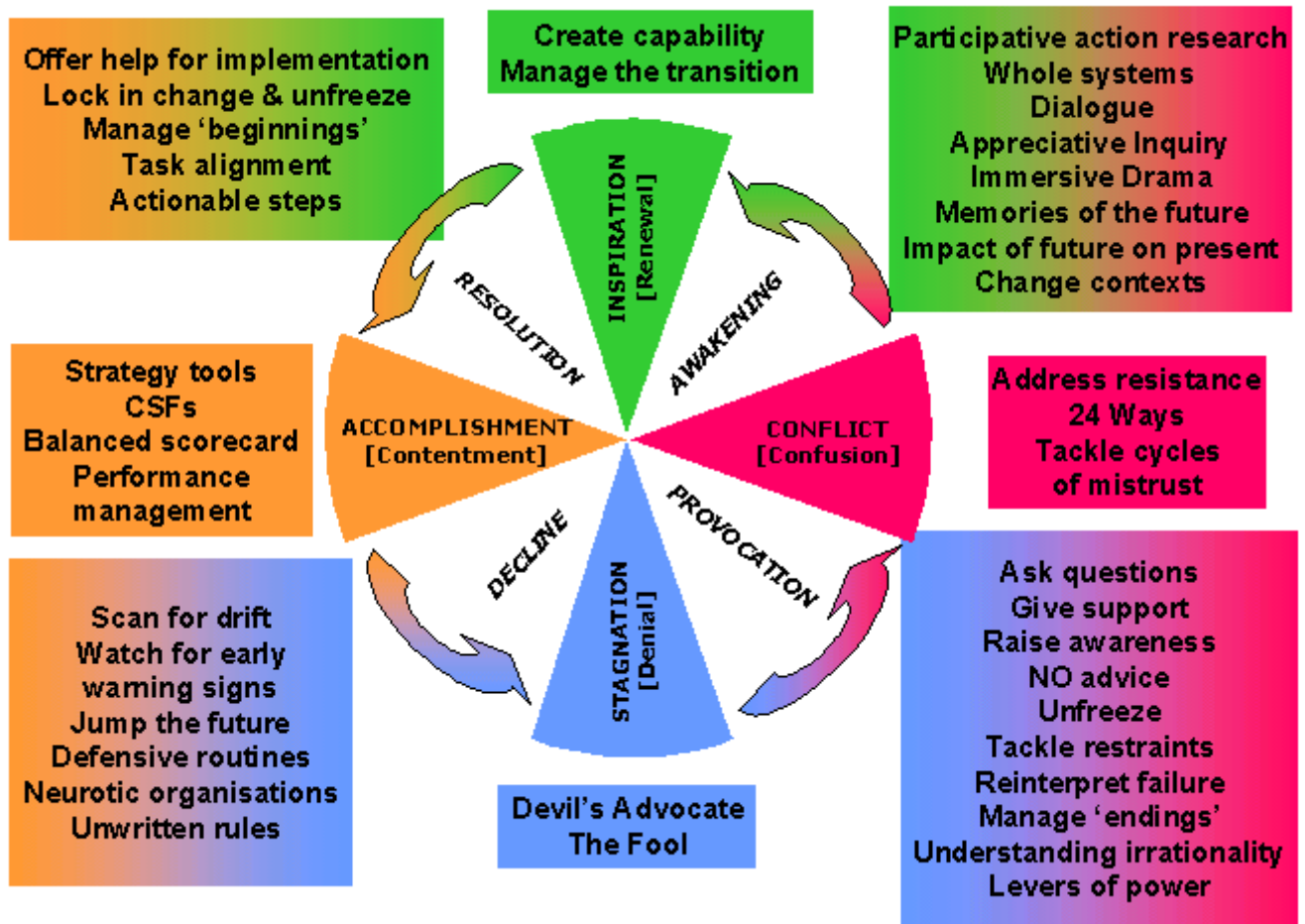
Diagram Two: The Wheel of Change

THE WHEEL OF CHANGE
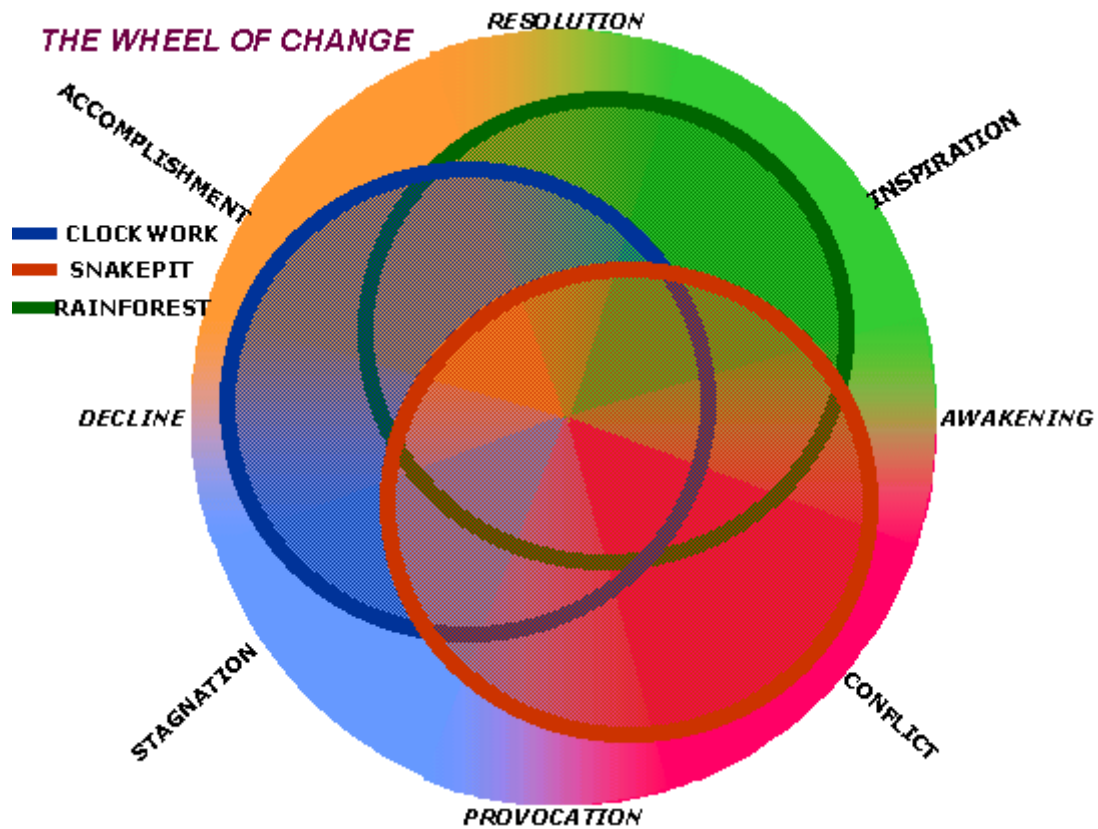
In Diagram Three a number of methodologies are identified in the top right of the diagram, although this is not to suggest that they only apply there. The majority of them (the exception being Dialogue) include also opportunities for renewal and action planning, and they are therefore relevant in Inspiration and Resolution also). This paper focuses on the last of these, in part because several of the others have been explored elsewhere (Darwin 1998; Darwin, Johnson and McAuley 2001), and in part because recent practical work using immersive drama and whole systems methodology serves to illustrate some of the themes of this paper. It should be stressed that none of these methodologies developed from complexity theory.   The argument is rather that each can be enriched and developed further by looking at the inter-relationship – at the pattern that connects.

Diagram three: Toolkits and The Wheel of Change

THE WHEEL OF CHANGE

Offer help for implementation
Lock in change & unfreeze
Manage 'beginnings'
Task alignment
Actionable steps

Create capability
Manage the transition

Participative action research
Whole systems
Dialogue
Appreciative Inquiry
Immersive Drama
Memories of the future
Impact of future on present
Change contexts

RESOLUTION

INSPIRATION [Renewal]

AWAKENING

Strategy tools
CSFs
Balanced scorecard
Performance management

ACCOMPLISHMENT [Contentment]

CONFLICT [Confusion]

Address resistance
24 Ways
Tackle cycles of mistrust

DECLINE

STAGNATION [Denial]

PROVOCATION

Scan for drift
Watch for early warning signs
Jump the future
Defensive routines
Neurotic organisations
Unwritten rules

Devil's Advocate
The Fool

Ask questions
Give support
Raise awareness
NO advice
Unfreeze
Tackle restraints
Reinterpret failure
Manage 'endings'
Understanding irrationality
Levers of power

Complexity and Immersive Drama

Third, in a typical ID both competition and cooperation will arise between the agents - the 'bones of contention'. Care is needed in relation to the design of conflict in the ID. Because an ID is exploring tension and dissensus, it is possible to create a context which has the danger of sliding into excess conflict – a snakepit – where working the boundaries becomes difficult. There may of course be contexts where this is an issue for exploration, but if so it needs careful design, and probably a degree of forewarning the participants (just as in whole systems events it is useful to warn people in advance that they will experience it as an 'emotional rollercoaster')

Fifth, an ID, like a rainforest, anticipates the future through implicit predictions. The extent to which this applies will depend on the participants, although the ID design will be intended to facilitate this in relation to the core issues being considered. The trigger question is important here. It should encourage participants to develop their 'memories of the future'. The later parts of the workshop, using a whole systems format, then allow them to compare these and draw out the implications.

Finally, a central part of an ID is constant interaction between the participants and the 'environment' created by the ID setting, whose regularities they need to identify and schematise. This ID setting will be formulated after analysis of the organisations involved and their environments. In an ID the participants create their environment and they are also created by it. Each emerges and changes as the ID unfolds, and behaviour and events occur which were not predicted in the initial design. Thus there is codependent arising.

To illustrate, we consider briefly a practical application of this approach in the field of health care, Here, Immersive Drama was interwoven with a whole systems methodology, the latter allowing participants to reflect on the implications of the drama and relate it to their wider experience. A major objective was to review perceptions of clinical governance by stakeholders across the NHS, and to consider the implications of these

perspectives for effective management. Clinical governance (CG) is the NHS term for ensuring continuous improvement to the quality of delivered services. It is both about learning and development and about the identification and rectification of failure. Participants were drawn from across the health economy, at local, regional and national levels.

The workshop focus was on the relationships needed to underpin effective CG, and the topic focus was determined at an early stage. The requirement was for a NHS-only problem, and one that had some characteristics of recent health service problems (i.e. clinical, high technology, specialist service). The aim was to build in an element of surprise, to enable CG systems and protocols to be tested.

Through preparatory interviews cross-linking themes began to appear. It was clear, for instance, that the drama would have to exemplify such generic themes as:

- Blame culture vs. learning culture
- Competing demands and limited resources
- Clinical vs. managerial imperatives
- Central control vs. local autonomy
- Relevant Information vs. data overload
- Political vs. clinical pressures
- Multi-organisational and multi-professional processes
- Universal service vs. local variation (the postcode lottery problem)
- Specificity of statistics vs. need for comparable statistics
- Patient centred vs. service centred activity (the winter crisis)
- Quality vs. reduced waiting lists

The drama was constructed so that there was a high probability that participants in role would encounter these and other tensions. To create a complex environment within which the 'key incidents' were submerged amongst others that were occurring, we used a multi-level approach. Three of these levels were multiply-developed issues or incidents, while the fourth was 'noise' (that is, unrelated issues intended to reflect the typical materials with which the different people and organizations have routinely to deal). All these were based on real medical incidents drawn from interviews or from written sources and varied widely in the action necessary.

While the detailed process and outcome of this workshop remain confidential, its broad contours can be used to illustrate the argument of this paper. Most of the activity in the immersive drama was about working the boundaries, either in terms of inter-organisational behaviour or partially related issues, reflecting the complexity of the day-to-day work of those involved. It allowed them to explore in a 'safely dangerous' environment contingencies which, should they face them in real life, could have major consequences for good or ill. Through experience of the immersive drama, coupled with analysis and discussion by all participants held immediately afterward, a number of practical proposals emerged to be fed into the decision making structure.

Conclusion

In this paper we have reviewed several approaches to working the boundaries – an activity of increasing concern and interest to those involved in organisations. We have made a modest case for the use of methods which are informed or enriched by complexity theory in appropriate circumstances. Experience over a number of years with whole systems events, with dialogue methodologies, and more recently with immersive drama, all suggests that these participative approaches can prove valuable in drawing upon the collective talent and expertise of organisations, and in developing strategies for change to which people will commit. In multi-organisational settings this is of particular importance, since without such agreement and commitment little can be achieved.

It has been important in this paper to avoid excessive claims for the 'rainforest', and to recognise that the clockwork and the snakepit are also important (even if they have undesirable aspects to them). There are times and contexts when the methods outlined in this paper can do more harm than good, and it is important for those involved to be able to recognise these. Thus the paper has sought to avoid a prescriptive approach: the

concepts and frameworks introduced here are intended to be of heuristic value, helping to indicate when a method can help, and when it may prove a hindrance.

Acknowledgements

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