CHAPTER EIGHT

THE COMPLEXITY AND CHAOS MODE AND MODELS

This chapter is about a mode of consultancy based upon complexity and chaos theory. The initial stages of two chaos theory based consultancy models have been written up, one in a book form about organizational consultancy and the other in an unpublished thesis about consulting in local Christian churches. These models and the research related to them, indicate that complexity and chaos theory have the potential to make considerable and radical contributions to consultancy praxis. Clearly, then, the models have an important place in this book. However, it is with some hesitation that I include them because my knowledge of the subject is limited and the application to consultancy is at an early stage.

The description of the first model follows the standard format used in this book whilst that of the other does not.

By way of general introduction to this chapter there is a brief introductory note about this wide-ranging field of study. This is complemented by the more limited and more manageable task of describing the understanding of complexity and chaos theory upon which each of the models is based and how it is seen to affect consultancy praxis.

Basics of complexity theory evolved concurrently from studies of complex systems in a number of different scientific fields: ecology, quantum physics, artificial intelligence, embryology, biology and meteorology. Complexity theory is, in fact, an umbrella term for wide ranging developments that have occurred in these fields. Common factors identified by Waldrop are paraphrased below.[1]

- In complex systems a great many independent agents are interacting with each other in a great many ways.

- The very richness of these interactions allows the systems as a whole to undergo *spontaneous self-organization*. Groups of agents seeking mutual accommodation and self-consistency somehow manage to transcend themselves, acquiring collective properties which they might never have possessed individually.

- These complex, self-organizing systems are *adaptive*, they do not respond passively but try to turn whatever happens to their advantage.

- Complex, self-organizing adaptive systems possess a kind of dynamism. They have acquired the ability to bring order and chaos into a special kind of balance.

- The balance point – often called the *edge of chaos* – is where the components of a system never quite lock into place, and yet never quite dissolve into turbulence either.

- Unpredictability[2] runs through complexity theory. Unpredictable creative potential is a characteristic of complex adaptive systems in which upheaval and balance occur at the edge of chaos.

Equally complicated are the different theories and ideas about complexity and chaos and the behaviour of complex systems. Scholars differ significantly, for instance, about the relationship between systems and complexity theory. It is sufficient here to note that some scholars see them to be compatible and closely related whilst others reject systems thinking and refer to "complex responsive processes". Again, scholars differ on whether or not complexity theory constitutes a paradigm shift from Newtonian physics with its assumptions of linear causality and objective reality.[3]

Model One: A Complexity Approach to Consultancy (CAC)

Director Professor Ralph Stacy and his colleagues of the Complexity and Management Centre (CMC) at the University of Hertfordshire have published a number of books and papers on complexity and organizations.[4] They focus on a radically different approach to strategic management which they argue at length and in depth. The nature of it is indicated in the following quotation:

> The central tenets of this approach are concerned with unpredictability and
> the limitations of control, and argue against the rational models of planning
> and control covered in other strategy textbooks. This is done by emphasising
> the importance of narrative, conversation and learning from one's own
> experience as the central means by which we can gain understanding and
> knowledge of strategy in organisations.[5]

A distinctive approach to consultancy has emerged from this impressive body of work. It is devised by Patricia Shaw, visiting professor at the University of Hertfordshire and a co-founder of the CMC, and described in a book in series on complexity and emergence in organizations, *Changing Conversations in Organizations: A Complexity Approach to Change.*[6] What follows is based on Shaw's exposition in this book of her approach and how it relates to the work described in earlier volumes in the series.

I The Story of the Model's Development.[7]

This model – or, possibly more precisely, approach – evolves from Patricia Shaw's involvement in the exploration of complexity theory and its implications for organizations and their management. For some twenty years she had acted as an organizational consultant. She studied and experienced a very wide range of approaches to consulting including some psychodynamic ones. And for five years she trained as a Gestalt practitioner. Shaw still calls herself an organization development consultant but she is aware that the way she now works has diverged from what this term normally means.

Two things stand out in what Shaw says about episodes that she now sees to be at the beginning of a major shift in her practice as an organization development consultant. One was an "uneasy sense of some facilitation and process consultation as facile". She says she is using "facile" to indicate that someone "is not altogether off track but has reduced or caricatured issues in some way that the accuser finds insensitive, even crass". Events are described to substantiate this. The other is that she was

> excited by the potential of the so-called complexity sciences for offering
> fresh insights into the phenomena of organizing. A new language was
> appearing as scientists attempted to describe complex dynamics in which
> phenomena were no longer perceived as either ordered or disordered, either
> stable or unstable, either organized or disorganized, but could paradoxically
> be both at the same time. The concepts of self-organization and emergence
> offered the beginning of insight into the conundrums I outline above. It is
> the implications and possibilities of this idea that leads me to talk of a
> complexity approach to change.[8]

II Knowledge Informing the Model [element (a)]

Basics of complexity theory are noted in the preamble to this chapter. Section One describes the basic ideas and concepts emphasized by Shaw, which form the knowledge base upon which her complexity approach to consultancy is based. Section two notes how, in order to further clarify and contextualize her approach, she distinguishes it from other approaches to consultancy.

Section One: The Complexity Approach to Consultancy

1. Theorizing

Central to the complexity approach to consulting is a particular way of theorizing designed *not* to create gaps and discontinuities between theory and practice which commonly occur. (It is fine in theory but different in practice.) When differentiated "'theory' is meant to map onto 'practice' and rarely does so to our full satisfaction".[9] Shaw's approach is very different. It is to "think in the flow of experience" itself which she sees to be a "flow of body rhythms, rhythms that shift as we sense, feel, associate, imagine, name think, speak, move, intuit, speculate".[10] Working as organizational consultants in the flow of experience involves, inter alia, "speaking, imagining, remembering, moving, feeling, designing, persuading, making connections, using tools, developing strategies, analysing situations, forming narratives, taking action in relation to others". In short it involves what Shaw refers to as "complex responsive processes of relating"- and that is what she means by the "flow of my experience".[11] What this means for theory, practice and theorizing in her approach to complex based consulting Shaw expresses in this way:

> Making sense of living in the world in this way *is* my ongoing practice; it is
> what I do. My practice is the patterning of my sense-making, which is my
> theorizing. In writing this, it becomes clear that I am using a logic that links
> concepts like theory and practice in a paradoxical way.[12]

She proceeds to say that she is using a logic "that links concepts like theory and practice in a paradoxical way". This does not mean that the concepts are not being collapsed to the same

thing. It does mean, she says, that "the paradoxical logic I am using to theorize here is a temporal rather than a spatial logic. It is a logic that distinguishes and relates concepts as emerging in a continuous flow of present experience rather than placing them in relation to one another as though presented to our gaze as a conceptual map". This approach is affected through and attributed to the following methods.[13]

Narrative sense-making of "everyday ordinary drama of people relating to one another at work". Stories of such events do not seem paradoxical because the "logic of narrative is necessarily temporal". The paradoxical nature of that logic, says Shaw, "only becomes apparent when I make the connections and relations explicit, particularly those that impute any kind of explanation, any kind of causality". This, she says, is "the paradoxical, iterative, non-linear movement of narrative sense-making".[14]

Metaphorical sense-making is used in complex consulting rather than maps and mapping metaphors. Metaphors of theatre and drama, particularly those of ensemble improvisation and improvised street theatre are used rather than those relating to formally shaped performances. These metaphors draw attention to "the fact that an improvised play is only being realised through the detailed interaction of the cast as the live action of the theatre." No participant is "outside the evolving action, able to direct the overall drama that is emerging". And such "drama and its meanings are always incomplete".[15]

Logical sense-making. Two kinds of logical theorizing are distinguished. One, the logic of paradox referred to above, uses "theatrical metaphor as a descriptive and evocative way of theorizing". [16] Another is the "logic of both/and thinking in which concepts such as individual/social are explained as complementarities which together form a unity or a whole". Shaw argues that "this kind of logic is the formalism of systems thinking and it is reflected in the spatial metaphors of maps and territories or lenses through which we look at organizations". It is the first of these that is appropriate to this model of consultancy.[17]

2. Changing Conversations

A basic assumption of this model is that "the activity of conversation itself is the key process through which forms of organizing are dynamically sustained and changed". This approach to consultancy focuses on: the "flowing ubiquity of the communicative dance in which we are all engaged; "conversing as organizing"; the value of "just talking"; "the self-organizing nature of ordinary conversations".[18] In short great emphasis is placed upon "just talking" but then, Shaw says, "We are not 'just talking', we are acting together to shape ourselves and our world".[19] Of this aspect of her approach she says:

Rather than inculcating a special discipline of dialogue. I am encouraging a perception of ensemble improvisation as an organizing craft of communicative action.[20]

3. Self-Organizing and Emergence

Participating in self-organizing processes of a largely conversational nature is central to this approach to consultancy. Underlying ideas about self-organization are discussed in earlier books in this series on "Complexity and Emergence in Organizations".

"Transformative teleology" is one idea which is used "to describe a paradoxical movement into a future that is under perpetual construction by the movement itself". Another idea is the "concept of complex responsive processes of relating" which emphasizes the multiple aspects of human relating in all its forms in local interactions between people. Yet another concept is "participative self-organization". At the heart of all this is the creative link between "organizing" and "conversation". "Organizing is conversational process and organizational change is shifts in the patterning of conversation".[21]

"Emergence" is a key theme for Shaw as it is for her colleagues in the Complexity and Management Centre. Professor Ralph Stacey, the Director of the Centre, defines emergence as "the arising of pattern through the process of self-organization". He expands this definition as follows:

Here, entities, components or agents interact with each other on the basis of their own local organizing themes and, in that interaction, their local organizing themes are reproduced and potentially transformed. This is the argument that connection, interaction, relationship between diverse entities have the intrinsic capacity for transformation…Another way of putting this is to say that individual relational practices replicate and potentially transform themselves. Individual relational practices are at the same time social practices simply because they are about interaction with others. Social practices are thus replicating and transforming at the same time as individual practices. Patterns of interaction are developing so that what is emerging is patterns of interaction from patterns of interaction…In other words, self-organization/emergence here is a transformative process in which patterns of social interaction transformatively cause themselves …[22]

A fundamental assumption in this "is that there is one level of explanation called the individual mind and another called the organization, which is a social structure or institution".[23]

Basic to all this is the understanding that "intrinsic patterning and novelty-producing capacity" emerge from interaction between diverse entities.[24] And, as we have seen, for Shaw, conversational activity is a central feature of self-organizing and emergence.

4. Emergence at the Edge of Chaos

The edge of chaos has been described by Arthur Battram as " the point in a complex system when ordered behaviour gives way to turbulent behaviour".[25] This state is present in all complex adaptive systems.[26] It is variously thought of as a "phase of transition", or as a "zone" rather than an "edge".[27] The edge of chaos can be seen as a zone in which "an orderly system starts to break down" and "the breakdown happens more and more frequently until the system is completely chaotic".[28]

Shaw attributes the intriguing image of the edge of chaos to a group of scientist at the Santa Fee Institute in New Mexico who were "exploring the behaviour of computer simulated networks of digital symbols or 'agents'" which were connected to a variable number of 'neighbours' so there was the potential for "connectivity across the network over time". These scientists found from the simulations that the patterning behaviour of very large numbers of such digital agents depended upon: the number and strength of the connections between agents; the diversity of agents; the intensity of the flow of information between them.

Shaw summarizes that patterning behaviour is related to "the intensity of interaction due to the mutual sensitivity or responsiveness of the agents".[29] The simulations revealed four different conditions, states or orders:

- *stable order* in which patterns of organization repeat endlessly and become "frozen" which was associated with low connectivity, low diversity and sluggish interaction;

- *disorder* in which no pattern was discernable which was associated with high connectivity, high diversity and intense interaction;

- *order and disorder* behaviour paradoxically combined;

- *transitional regime* in which "the networks display a capacity for shifting organization, producing patterns that propagate, grow, split apart and recombine in complex ways that do not repeat themselves although they may have a qualitative familiar character".[30]

Complex networks interacting in the third and fourth ways were said to be "at the edge of chaos".

In her consideration of the use of the analogy "at the edge of chaos" as a metaphor and analogy for the self-patterning process of human interaction Shaw is guided by two things. The "analogies have to do with the nature of the dynamic 'at the edge of chaos' but not its production". Secondly, following Stacey, she notes that in the domain of human interaction there is no "external agency" or programmer setting and holding the conditions steady as in the experiments at the Santa Fe Institute. With these understandings, Shaw examines the concept of the edge of chaos first as a metaphor and then as an analogy for self-patterning processes of human interaction.[31] I quote extensively below from two key paragraphs in order to communicate what she says on these key issues and the subtle nuances of her approach.

> As a metaphor we can imagine that in free-flowing communicative action, we co-create qualities of responsiveness between us whereby we experience meaning on the move, neither completely frozen into repetitive patterns nor fragmenting and dissolving into meaninglessness. From within the conduct of the conversation, what seems solid would be melting at the edges, while what seems shapeless would be gaining form, at the same time, not to create a single unified landscape for all, but a shifting topology of partial orderings in which we recreate our situation as both recognizable and potentially novel at the same time.

> As an analogy... we take a relational view of forming and being formed simultaneously in interaction. The 'conditions' that affect the kind of patterning are no longer quantitative parameters which can be set by an external agency. Rather, they are variations in the qualities of human communication to do with such relational factors as the movement of affinity/antipathy, inclusion-exclusion, identity/difference, competition/co-operation, power relating and experiences of anxiety/spontaneity. We can create between us 'conditions' in which we experience our conversations as stuck and repetitive, or more positively, as reassuringly recreating a sense of familiarity and stability. It is also possible for us to create conditions in which we experience loss of meaning and, indeed, alarming experiences of

loss of self. However, we also often co-create conditions of free-flowing communication which we experience as the paradox of continuity and change. The significance of the past may be recast, a new sense of where to go from here materializes, there may be a shift in people's sense of self and in their relations to others, what can be envisaged takes on a fresh shape. The patterning of our social identities shifts spontaneously.[32]

Having established the "spontaneous emergence of this 'edge of chaos' dynamic in conversations" she notes human propensities which can compromise the processes: the desire to set controlling parameters in advance; agreeing inhibiting ground rules for good communication; formulating unhelpful notions of "good conversation". And she notes that the qualities of conversation are "emergent properties of interaction which cannot be analysed in terms of the behaviour of the individual agents or their interaction".[33]

Section Two: Complexity and Other Approaches to Consultancy

By comparing and contrasting the similarities and differences between her approach and those of others Shaw sharpens up and heightens critical features of her model of consultancy and differentiates it from others with which it could easily be confused. Noting the distinctions she makes, helps to pursue our purpose of describing her complexity approach to consultancy.[34]

1. Organizational Development (OD)

OD practitioners apply the behavioural sciences to organizational development using reflexive, self-analytic methods. These methods, says Shaw, "always ask people to reflect on and change the underlying patterns that are causing observable system behaviour". Doing this, she says, splits experience from making sense of experience whereas, as we have seen, the essence of complex consulting does not create such a split: thinking is done in the flow of experience itself; there are no gaps between theory and practice.[35]

Shaw pursues this issue by examining Kurt Lewin's action research method which became the primary methodology of OD. (Lewin's idea was to develop "a science of practice" through "co-operative research" intended to heal the split between pure and applied research and "the unease created by doing research 'on' people rather than 'with' them".[36]) A four phase OD interactive learning cycle evolved: immediate experience is the basis for observation and reflection; theories formed of how things work and how to intervene; hypotheses and implications for action deduced; application leads to new experiences. Shaw points to the difference between this approach and her own:

> This constituted an approach to experience and action that brought together a positivist scientific orientation and the idea of circular feedback processes in cybernetic models of self-regulating and adaptive organisms and ecologies. We are asked to understand ourselves as repeatedly pausing in the present to learn from the patterns of the past and thus design patterns to better serve our ends in the future. This is a particular way of thinking about our self-consciousness as humans. It involves key conceptual separations – analytical/diagnostic observation *of* our ongoing participation *in* 'structured (i.e. repetitive) human processes' in order to design the patterning of future action.[37]

2. Process Consultation [38]

Shaw sees significant differences between Schein's approach to process consultation, described in Chapter Five Model 1, and that which she espouses. His approach involves, inter alia, highly complicated conceptual mapping of observed patterns of interaction. Shaw's comment on this is:

> It is very noticeable that any idea of change as a spontaneous process emerging as persons relate to one another while pointing to these maps is never considered. What Schein is always emphasizing and wanting to harness is our individual human capacity for conscious rational choice exercised on behalf of some whole pattern of interaction to be achieved by changing the detail of local interaction.[39]

This is clearly different from the CAC approach.

A major point made by Shaw is that Schein emphasizes that conceptual distinctions are "essential for making sense of experience and for guiding action" even though those made "in theory" are not so clear cut "in practice". She argues that:

> ...this kind of conceptualising is *not* essential. It is only essential if creating maps as guides to action is felt to be essential. Instead of thinking as if systems behind or below or above our immediate interaction are causing our actions, this series is proposing that we think as participants in the patterning process of interaction itself as the movement of experience. By thinking within our participative action, we must turn in our search for causes to the paradoxical nature of our experience of human relating. This, then, brings our attention to the way we are continuously constructing the future together as the movement of sense-making in the present. The potential for both stability and change is arising between us as the constraints of history are reshaped spontaneously, changing the meaning of the past *and* the future in the immediate experience of relating as embodied persons.[40]

3. Reflective Practice and Practitioners[41]

Reference is made to two leading thinkers, Chris Argyris and Donald Schon. To bridge the gap between theory and practice, rationality and humanness, Argyris got people to map what was *really* informing and guiding their actions ("theories in use") instead of what they *said* or *believed* was guiding them ("espoused theories"). Schon saw that for professionals to be "reflective practitioners" it is necessary for them to "hold reflective conversations with the materials of their situation and thus remake part of their practice world, revealing the usually tacit processes of world-making that underlie all of their practice".[42]

These ideals of reflective practice and reflective practitioners, Shaw says, continue "to grip our imaginations and shape our aspirations to be effective and competent individual practitioners engaged in life-long learning". In contradistinction to this Shaw is directing our attention to

> ...what happens when spontaneity, unpredictability and our capacity to be surprised by ourselves are *not* explained away but kept at the very heart of an account of the evolution of sense-of-self-in-the-world.[43]

4. Gestalt Consulting

From her training as a Gestalt practitioner Shaw says she learned "to pay attention to the responsive gesturing of communicative interaction in which my experience of myself-amongst-others was always recapitulating and yet shifting the paradoxical movement into what Griffin calls the 'known-unknown'." Gestaltists conceive experience as "a continuous flow of shifting experience, yet their continuing theorizing continues in terms of maps and wholes". Maps and wholes, she observes, which refuse "to sit still"! The following quotation from Nevis prefaces an unease.

> Contact is the experience from which meaning is extracted; resolution is the act of extracting meaning and recognising that closure has occurred, and that the situation is finished or complete. Once meaning is extracted, we can say that learning has occurred...what has been learned becomes part of the ground and is available for later use.[44]

Shaw always found these formulations confusing. They always begged a question which she is only now able to formulate, "What is it we are supposed to be making meaning *of,* or extracting meaning *from* that is changed by meaning making?"[45]

5. "Soft" Systems Methodologies[46]

Shaw says that some of the issues she has raised about mapping and modelling organizing processes have been met by the move from "hard" to "soft" methodologies. Checkland, she notes, (see Chapter Three, Model One: Soft Systems Methodology) "offers a disciplined way to explore the subjective viewpoints and the intentions of all involved in a situation". It "does not seek to study objective facts or search for causal relations because they view systems as the creative mental constructs of the human beings involved in a process of learning about the divergent ways they are construing the situation". Systems *thinking* is a "theory of the observer, rather than the observed"; *systems* practice is a way of helping people to make "rich pictures" of their world. However, for Shaw, "the kind of thought being enabled here is still that of rational frameworks for representing completed patterns of relations for our reasoning gaze to comprehend as an over view".[47] This contrasts with Shaw's:

> ...striving to stay with processual thinking which is always incomplete because of the very nature of the dialogically structured conversational realities emerging in reciprocally responsive relationships between living embodied persons.[48]

6. Getting The Whole System in the Room (GWSR)[49]

Shaw says that facilitator–led large group events aimed at "getting the whole system in the room" are increasingly popular. "The working concept is to bring a microcosm of the whole complex system together and create the conditions that foster spontaneous reorganization into more aligned, goal directed activity".[50] These events are seen to be a major advance in system interventions able to produce rapid change. Two methods are

examined, Open Space Technology and Future Space Conferencing. The principal differences, which sharpen up the nature of Shaw's approach, are as follows:

- There is no preconceived pattern of work and outputs in the Complexity Approach to Consultancy (CAC) as there are in getting the whole system in the room (GWSR). What emerges evolves live.[51]

- CAC does not focus on improving the whole system and so getting the whole system or a microcosm of it in view is not necessary.[52]

- CAC operates through "people making narrative sense of being and working together by responsively weaving stories that make sense of their presence in the communicative action that is evolving".[53]

- Participants in CAC "experience a wide range of thoughts and feelings, but it is not orchestrated as a collective experience or collective journey in any way".[54]

7. Organizations as "Living Systems"[55]

A growing number of organizational practitioners talk about organizations as "living systems" rather than about "organized wholes and whole systems". This leads to the understanding that organizations are in some way alive, "living wholes" with their own integrity of identity and purpose, something with a mind of its own.[56] Notions of the spirit, soul, collective intelligence and wisdom become associated with or incorporated into the concept of living systems or wholes. Shaw feels deeply uneasy and troubled whenever she experiences these ideas in operation. She feels that it represents "a religiosity in a secular age searching for spiritual meaning seems to be embracing a missionary zeal articulated by writers … who talk about communities of love and the soul at work."[57]

Another difference relates to the understanding of "transformation". For Shaw it relates to "evolving forms of identity, of persons, groups, societies, emerging as we participate in the non-linear processes of human relating in which both continuity (sameness) and change (difference) occur simultaneously - that is the paradox." Whereas for some practitioners of a living systems approach it is about "transformation from conflict and fragmentation to *the good* as the cohesion of shared vision and joint purpose".[58]

Shaw gets at yet other significant differences by examining what Claus Otto Sharmer means by "sensing and actualising emerging futures", which he claims is a new understanding of leadership. Sharmer argues that two processes of learning are required for organizations to succeed, reflecting on the experiences of the past and "sensing and embodying emergent futures" in contradistinction to re-enacting the patterns of the past. These are referred to as processes of *presencing*: the one *presences* the past and the other the future. The future is understood as "an emerging transcendent whole to be accessed in an essentially mystical manner through bringing it into the presence".[59] Presencing is "a process of becoming aware, which involves suspension, redirection and letting go". It is described in mystical language: it is going through the eye of a needle, a birth, a breaking through a membrane. It is awareness of "what lies beneath or above or behind our experience of direct interaction". Shaw argues that in this approach "the present … has no time structure". In contradistinction CAC is "about the time structure of a living present by which we mean our lived experience of the movement of experience".[60] Through direct interaction and complex responsive relating, the past is reconstructed and possibilities of the future are constructed. For Sharmer emergence

means "the coming into presence of the transcendent whole; whereas in complex responsive process theory it means "the self organization of pattern in communicative interaction between people". Again, for Sharmer communication is "a special form of dialogue, ultimately a sacred silence. In complex responsive process theory the focus of attention is on ordinary everyday conversation and how it constructs social realities".[61]

III Praxis of the Model [element (b)]

Section II describes the nature and characteristics of this complexity approach to consultancy. This section focuses on Shaw's consultancy praxis.

1. Modus operandi: how the model works

Because it is so different, getting at the praxis of this model involves putting aside much that is associated with the other models. Stating what consultants do *not* do helps to do this. It is precisely what Shaw does on the first page of *Changing Conversations in Organizations*. Then it is easier to discern what consultants do to put this model into effect.

What consultants do not do

When Shaw adopted a complexity approach to consultancy she found "she was being accused, albeit with curiosity, of not being a 'proper' consultant, or coach, or facilitator". Approvingly, consultors said that she was not like other consultants although they could not express more precisely what they valued about her approach. Comments referred to what she was *not* doing in single or extended consultancies. They noted she did *not*:

- write formal proposals for work;
- prepare detailed designs for meetings, conferences and workshops;
- develop detailed aims and objectives in advance;
- clarify roles and expectations or agreed ground rules at the start of working;
- hold back her views or opinions;
- develop clear action plans at the end of meetings;
- capture outcomes;
- encourage "feedback" or behavioural contracting between people;
- "manage" process.[62]

And, as we saw in Section I, she distances herself from the idea of being a "facilitator".[63] All these things are commonly associated with consultants. So, what does she do? A short answer is that she stimulates creative conversations in organizations about things of concern and importance and participates freely in them in. Now to a longer answer!

What consultants do

Basically consultants try to live and work out the concepts noted in Section II in the actualities of any conversations in which they are engaged. Amongst other things this involves what follows. I offer them hesitantly because Shaw says:

I am beginning to construct a coherent rationale for such an approach based on understanding organizations as complex responsive processes of relating.

I am describing a mode of working that does not proffer a blueprint for practice, that does not define roles or select working models. Rather, I am describing how we·may join ongoing conversations as participant sense-makers, helping to develop the opportunities inherent in such conversations... I am drawing attention to vital, informal, shadow processes that more dominant systematic perspectives render rationally invisible. These are the ordinary, everyday processes of organizational life that offer endless opportunity as we move from conversation to conversation. [64]

Approach to conversing

Shaw says that in "oral encounters" we speak into one another's responses, not in a simple 'first one, then the next' kind of way.[65] People shape their utterances to one another. They say things they did not realise they thought. They loop backwards and forwards over the subject matter and between the participants. They develop, re-shape, re-form and transfer their thinking. This is very different from how conversations are normally written up. Conversation has different qualities which are emergent properties of human interaction. Complexity consultants respect and work to these qualities and to the complex and somewhat disorderly nature of conversing.[66]

Formulating notions of "good conversation" may be unhelpful and so complexity consultants avoid agreeing ground rules for good communication such as those in the following typical list.

> Do not interrupt one another
> Listen carefully
> Respect others' views
> Suspend judgements
> Express yourself concisely and clearly
> Check your understanding
> Balance support and challenge
> Be open and honest
> And so on ....[67]

Participation

Shaw is an active participant in the conversation and in all aspects of the sense-making as she makes clear in the following quotations:

> I intentionally participate in the chat of organizational life, joining conversations in corridors, informally dropping in on people in offices and taking many a cup of coffee. I also regularly phone people to talk things over. When I join existing task forces and working groups, *I participate rather than attempt to facilitate them.* I ask questions, voice opinions, make suggestions, interrupt people, show my responses...[68]

> I actively take up responsibility with others for participating in the often fraught processes by which we are always coming to know ourselves and what we are in the process of doing. To the extend that I have authority by being invited to work in the organization by a usually senior manager, I use it to exemplify and encourage curiosity in and exploration of a continuous inquiry mode- what do we think we are doing here? [69]

> Sessions are not "orchestrated". [70]

I have put the key phrase *"I participate rather than facilitate"* in italics because this approach to consultancy is so different from those in which performing facilitative and enabling roles and functions without taking sides are central features.

Questions

As she participates Shaw works iteratively with consultors with questions such as:

> Who are we realizing we are as we gather here?
> What kind of sense are we making together?
> What are we coming to talk about as we converse?
> How are we shifting our understanding of what we are engaged in?
> What kind of enterprise are we shaping?[71]

Practice of conversing

Shaw says that rather than attempting to operate on whole systems she is engaged in "the process of weaving in our actions one with another to co-create our future". She makes suggestions about what this practice means in terms of "the transformative activity of conversation". Suggestions more directly related to praxis are:

- that our organizing changes as our patterns of accounting to one another for what we are doing changes;

- that we may understand ourselves as engaged in the co-created, open-ended, never complete activity of jointly constructing our future, not as the realization of a shared vision, but as emerging courses of action that make sense of going on together;

- that we must pay proper attention to this process of prospective sense-making rather than only attempting to piece together a picture of our situation that we may then seek to change;

- that the transformative potential of conversation may be blocked by demands for early clarity or closure;

- that acting without clear outcomes in mind does not mean acting randomly without intention;

- that clearly agreed roles are not always needed for useful participation.[72]

2. Operational Modes

From the case studies it seems Shaw normally operates as a consultant on her own. Consultancies begin with the first conversation wherever and whenever it occurs – on the telephone, in a corridor, over coffee, in a director's office or a conference. She follows them through to wherever they take her and those with whom she is conversing. An extract from her description of a case provides insights into the way in which she operates and into the feel of her consultancies.

> I did not discuss with Cesare [a client] what role he wanted me to take at the meeting. Instead my involvement was based on the idea that I would 'join' the meeting which leaves unspecified in advance of interacting what the 'rules' of interaction should be....

> People were beginning to gather in the corridor for Cesare's meeting so we

moved out of the office to greet them. They were a whole generation younger than the people I had met so far, both men and women. We trooped back into the conference room I knew from before. Cesar introduced me, "This is Patricia. She helps with our company becoming something new. I asked her to come and talk with us. She spoke to the site committee already. It was very interesting." They all looked at me expectantly. I suggested that we abandon the primary use of English. "My Italian is minimal. I will speak in English, but please feel free to speak together in Italian. I will ask for translation when I need it. Cesare has been talking with me just now about some of the difficulties he is experiencing." There followed an exhausting but exhilarating couple of hours. Cesare launched into an only slightly constrained version of what he had been saying to me earlier. It was as though talking to me, and in some way my presence, loosened any reservations he had felt about opening up this conversation. He was rapidly interrupted in Italian and responded in his native tongue. I quickly lost the detail but I could sense the surprise, agreement and anger around the table. I guessed possible content from the flow of emotions, gesticulations, expressions as chairs were pulled back, people stood up and walked around. I began to join in, asking questions, making comments.[73]

IV Application: Work Settings to which the Model is Applicable [element (c)]

Case study material shows that Shaw has used to good effect her complexity approach to consultancy in a range of business organizations, global corporations, a telecommunication company and a chemical plant. She has used it extensively in working with managers individually and in groups. She used it in work with a London Borough.

V Understanding of the Consultor's Work [element (e)]

From the case studies and the description of the praxis of this approach, no specialist knowledge of the nature of the work of consultors and their organizations is required. What is required is the understanding and ability to practice and communicate the complexity approach to consultors and to people in their organizations. But I presume that complexity consultants draw deeply upon the knowledge and insights about strategic management, organizational dynamics, complex responses processes and complexity generated by the Complexity and Management Centre.

VI Principles [element (e)]

This model is a particular application to the praxis of consultancy of some principles and assumptions which have emerged from the work of the University of Hertfordshire Complexity and Management Centre. It is these that are noted here without attempting to set them in the wider theoretical base from which they are derived: that is beyond the remit of this book. As the principles, concepts and ideas underlying this model are implicit in what has already been said about it above, they can be noted briefly and in a summary manner as follows.

- Complexity and chaos theory has profound implications for organizational

consultancy. It challenges traditional ways of proferring consultancy help. When taken seriously it leads to new and radically different emergent forms of consultancy which are proving to be effective.

- It is possible to work creatively with complexity in relation to organizational behaviour and work and to help people to do so through a complexity approach to consultancy operating through "conversations".

- Complex adaptive systems have extraordinary potential abilities for self-organization through which new patterns of coherent, but unpredictable behaviour emerge. "Self-organization" and "emergence" are fundamental concepts. The "edge of chaos", a zone in which an orderly system starts to break down and characterized by the paradoxical combination of order or stability *and* disorder or instability, is potentially the most creative state for emergence to occur.

- "Conversation" is the key consultancy process because it is a self-organizing process with transformative potential when it is understood as *conversing as organizing*.

- The model is based on "temporal" rather than "spatial" logic, i.e. "it is a logic that distinguishes and relates concepts as emerging in a continuous flow of present experience rather than placing them in relation to one another as though presented to our gaze as a conceptual map".[74] This approach to theorizing, valued because it brings together theory and practice, operates through narrative, metaphorical and logical sense making.

- Whilst there are similarities with other models, significant conceptual differences distinguish it from them. Assumptions, concepts and principles indicated above differentiate it conceptually and pragmatically from: organizational development (OD); action research; process consultation; reflective practice; Gestalt consultancy; soft systems methodologies; approaches to working to whole systems; and treating organizations as "living systems".

VII A Summary of Key Features of the Model

Basic elements of this approach to consultancy are modelled diagrammatically in Figure 8:1. It is interesting to note that some of the characteristics appear under different elements: a cross referencing aspect of the approach to "theorizing".

- requires knowledge of how to work with consultants and their organizations in the light of complexity and chaos theory
- does not require specialist knowledge or experience of consultor's work

- complexity and chaos theory and its implications for and application to:
  - organizations
  - management
  - consultancy
- complexity and systems theory
- narrative, metaphorical and logical sense-making
- distinctions between CAC and other consultancy modes and models

understanding of consultor's work

knowledge — A Complexity Approach to Consultancy (CAC) — praxis — application

principles

- global corporations
- industrial organizations
- business organizations
- management
- civic authorities

- complexity and chaos theory has profound and novel implications for:
  - understanding and managing organizations
  - consultancy
- complex systems are able to self-organize including at the "edge of chaos" and for new patterns to "emerge"
- it is possible to work creatively with complexity in organizations through "ordinary conversations" which are self-organizing
- conversations are key to consultancy processes
- commitment to "temporal" rather than "spatial" logic and to theorizing which integrates theory and practice in the flow of experience

- consultants participate freely and spontaneously in consultancy relationships and conver-sations rather than act as a "facilitator" as commonly understood
- joins ongoing conversations as a participant sense-maker
- engages in and promotes changing conversations through "complex responsive processes of relating"
- promotes and engages in narrative, metaphorical and logical sense-making
- works interactively with basic questions about:
  - identity of consultancy group
  - sense making
  - conversations
  - understanding
  - enterprise shaping

Figure 8:1: A Diagrammatic Representation of Fundamentals of a Complexity Approach to Consultancy

Model Two: Consulting at the Edge of Chaos

This is a shorter piece on research into the application of complexity and chaos theory to work consultancy in the Roman Catholic Church. It was carried out by Ms Vicky Cosstick and written up in an unpublished dissertation entitled *Working at the Edge of Chaos: An active research approach to facilitating change in the local church [deanery] using complexity theory.*[1] The abstract reproduced below written by Cosstick gives a succinct summary of the context and research.

The author has worked for many years as an adult educator and facilitator with groups and structures in the Roman Catholic Church. Her research for this dissertation was part of a much larger project working with the clergy of one diocese. For the dissertation, she facilitated three meetings with a local (deanery) group of six priests as they attempted to find a different way of working together in the context of falling numbers of priests and changing patterns of authority in the Roman Catholic Church. This context, and the dynamic between the participants, generates the "edge of chaos" situation in the group. The dissertation pays special attention to the role of listening as an intervention in group facilitation. A variety of approaches to action research, and its compatibility to complexity theory, are also examined. The conclusion is reached that organizations need to provide listening spaces where conversations around ambiguity can be explored, and these conversations benefit from a particular style of facilitation.[2]

Several things make this dissertation, and the consultancy and research work upon which it is based, significant. First, the outcome was good: the priests in the Deanery, previously in some disarray, became increasingly proactive and decided to work together as a team. The Vicar General said that it was the first time that a deanery in the diocese had come up with a proactive plan of this kind. The priests said that this outcome would not have taken place without Cosstick's facilitation.[3]

The second thing that makes this dissertation significant is that it spells out the theoretical and theological bases of the consultancy, facilitation and research approaches and methods adopted. Cosstick forged out her praxis through perceptive critical examination of a range of conflicting theories, which she describes in the dissertation.

The third thing is that Cosstick's praxis differs in important ways from that of Shaw: similarities can obscure these differences. A comparative analysis is not attempted but notes that follow indicate differences.

Key aspects of Cosstick's underlying theory and intervention strategies are summarized below to present a picture of her consultancy model.

1. Complexity Theory

Cosstick identifies with the phenomenon associated with complexity and chaos theory identified by Waldrop, which are summarized in the introduction to this Chapter. Other aspects of her position emerge below. She says she chose to use complexity theory for this project because it seemed to fit her "experience of working with change in the Roman
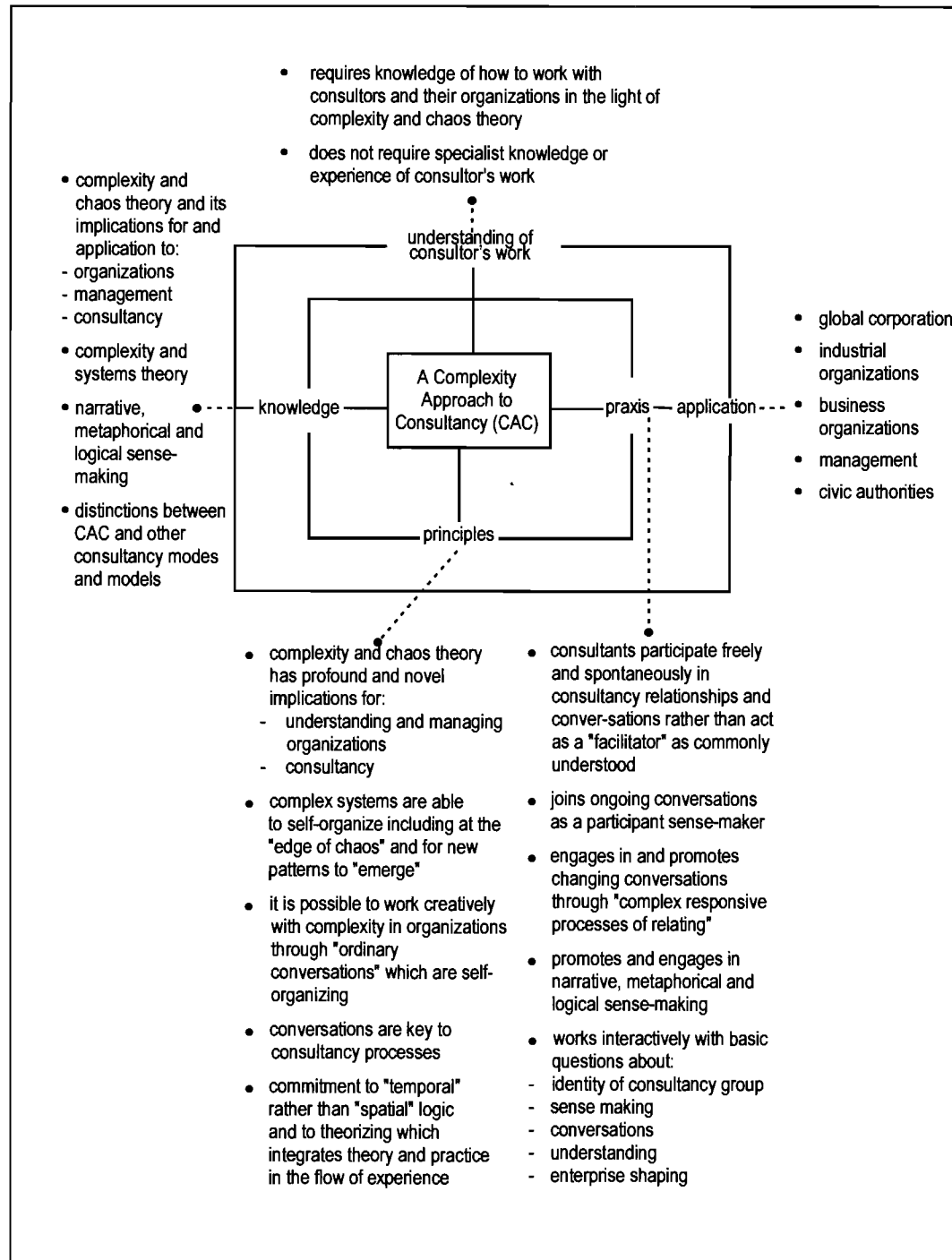
Catholic Church" and because it affirmed her experience and instinct that we are not in control, whether as managers, consultants or facilitators.[4]

Following Peter Murray, Cosstick believes that "complexity theory is a set of ideas which are not yet coherent". Two questions remain for her about complexity theory and organizations: "In what ways can human organizations...be likened to the physical and organic systems with which complexity theory initially concerned itself ?" and "If we believe that human complex systems are like organic and physical systems, what do we actually do in organizations as consultants or change agents that puts this belief into practice?"[5]

"Emergence", is understood as "the appearance of properties at one level that depend on a lower level but cannot be reduced to that lower level."[6]

2. Complexity and Systems Theory

Cosstick believes, with Margaret Wheatley and Robert Louis Flood and against Ralph Stacey, that "complexity theory is not only compatible with systemic thinking but that complexity theory requires systemic thinking in order for its potential as a means of understanding organizational change to be realised". And she uses systemic thinking not least in conceptualising and understanding the Church and its context.[7]

3. The Importance of the Local

Whilst Cosstick rejects Stacey's critique of systemic thinking, she agrees with his focus on "local processes in the living present" and his conviction that "making sense of organizational life requires attending to the ordinary, communicative interacting between people at their own level of interaction in the continuous present".[8]

4. Principles Underlying the Intervention Strategy[9]

Cosstick introduces the section in her dissertation on this subject by saying "complexity theory has no intervention strategy, ... no guidelines or list of principles anywhere that I have found for putting it into practice". Faced with this lacuna, drawing upon the work of Margaret Wheatley, Mitchell M Waldrop and David M Levin, she developed the following which she describes as "a rudimentary set of working principles".

- The strategy is based on the assumption "that creative solutions to problems would *emerge in edge of chaos* conditions in the group".[10] (Cosstick's italics and bold type.)

    The edge of chaos, suggests Cosstick, is experienced in groups when members become aware through honest, open and free flowing discussion of the realities and impossibilities they are facing and experiencing. It is also experienced when aspects of the "shadow life" of the group enter its conversations.

    Following Arthur Battram, she sees the edge of chaos as "flow": "one of those deep conversations where the insights and difficulties are mixed together as the talkers learn from one another at the limits of their understanding". Chaos is one of the four states in which Battram assumes groups may exist.[11]

State 1. Stasis: defunct

State 2. Order: not adapting, not responding to change; going through the motions; complacent and unresponsive.

State 3. Complexity: complex patterns of order and disorder, evolving, changing patterns; effective and creative; turbulent and uncomfortable.

State 4 Chaos: war, insufficient stability to support communication.[12]

Cosstick produces a striking diagram to illustrate these things, see Figure 8:2
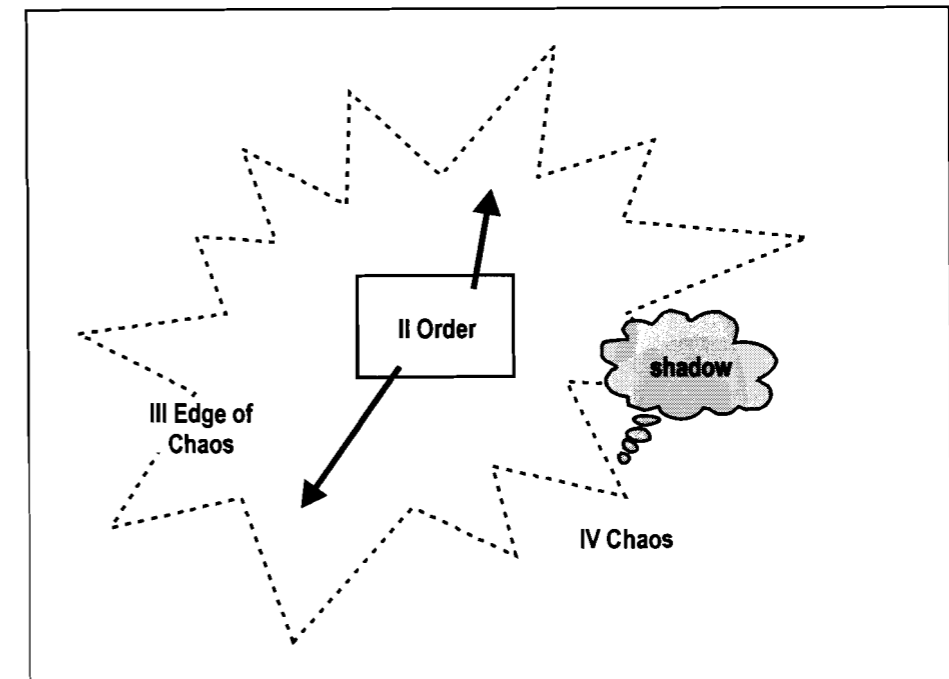

Figure 8:2 The Edge of Chaos in Context[13]

- For Cosstick the "role of the *complexity facilitator* is to step back (masterly inactivity) with the group into edge of chaos". (My italics). This, she claims, allows the parameters of the group's conversation to shift and the shadow becomes part of the conversation".[14] Inter alia, this involves the loosening of the possibly too tight parameters of state 2 above. She claims that there is no fear of chaos "because natural parameters will come into play" [15] through processes of *autopoiesis* or *self-reference*.[16] She was, in fact, able to help the priests move to and to hold to the point of chaos and there to be creative.

- The quality of listening leads to the *emergence* of potential in people and situations. Listening is closely related to *present moment awareness*. Cosstick uses Levin's four stages to distinguish modes of listening: primordial attunement; everyday listening; skilfully developed listening; hearkening–listening as recollection.[17]

- Designing *processes*, which bring health to a system by connecting it to more of itself, is a function of facilitators rather than producing plans or solutions. One way of doing this, Cosstick has found, is through *rich pictures*, feedback through visual portraits of the context or situation (see Chapter II Model 1). Other *feedback* methods help connect systems to more of themselves.[18]

- Edwin C Nevis' Gestalt thinking about *resistance and conflict* as products of multi-directional energy is another principle of strategic thinking.[19]

5. Modes of Intervention

Strategic principles were put into practice through modes of intervention. Cosstick started meetings in various ways. To start the first meeting, for instance, she gave the priests a handout about her dissertation and complexity and worked through it with them; before the final meeting she sent a draft of her dissertation which included reports of the meetings; yet another meeting she asked the priests what they remembered of the previous meeting. But for the main part of the meetings, she says, "I simply sat back and took detailed notes of the meeting which I was able to send to all after the meeting. I made very few interventions".[20] So, she facilitated the meeting by her presence, her inputs and by feedback papers on their discussion. Seemingly this was sufficient for the priests to move into the edge of chaos zone, to hold back from the chaos zone and to allow new patterns of thinking and organizing to emerge through "autopoiesis" and self-organizing processes.

6. Action Research and Consultancy

Cosstick found that using rigorous research techniques added value to the work. The action research methods she used meshed with complex consultancy processes. As it transpired the use of action research methods turned out to be much messier than it is sometimes presented to be. She found that it "represented itself as self-organization and emergence in the edge-of-chaos zone between order and chaos".[21] (Cosstick's approach to action research drew upon several writers on the subject but notably Brian Goodwin, P Lomax, Robin McTaggart, J M C Niff, Peter Reason and J Whitehead. Their approaches resonated with those of complexity consulting.)

References and Notes: Model One: A Complexity Approach to Consultancy

1. Waldrop, M Mitchell (1994) *Complexity: The Emerging Science at the Edge of Order and Chaos* (Penguin Books) pp11-12

2. ibid., cf pp36-37

3. Cosstick, Vicky, *Working at the Edge of Chaos: An action research to facilitating change in the local Church (deanery) using complexity theory* (Dissertation submitted to the School of Education Studies, University of Surrey, In partial fulfilment of the requirements for the degree of Master of Science in Change Agent Skills and Strategies in June 2002. Unpublished. See section 2.3.1, pp14-15

4. Included amongst these are the following books. Stacey, Ralph D; Griffin, Douglas; Shaw, Patricia (2000) *Complexity and Management : Fad or Radical Challenge to Systems Thinking* (Routledge). Stacey Ralph, D (2001) *Complex Responsive Processes in Organizations: Learning and Knowledge Creation* (Routledge). Stacey, Ralph D (2003) *Strategic Management and Organizational Dynamics: The Challenge of Complexity* (FT Prentice Hall)

5. Stacey, Ralph D (2003) op. cit, a blurb summary statement used because it is such a good succinct statement.

6. Shaw, Patricia (2002) *Changing Conversations in Organizations: A Complexity Approach to Change* (Routledge) 189pp

7. The information in this section is variously drawn from Shaw, Patricia, op.cit. pp i, 2, 5-8, 136-137

8. Shaw, Patricia (2002) *Changing Conversations in Organizations* , p20

9. ibid., p118

10. ibid., p119

11. ibid., p120

12. ibid., p120

13. ibid., cf p 121

14. ibid., for quotations in this section see p121

15. ibid, for this section see pp122-123

16. ibid., p123

17. ibid., cf pp123-125

18. ibid., quotations variously taken from pp10, 11 and 15

19. ibid., p40 cf pp11-18

20. ibid., p164. Shaw contrasts her approach with that of David Bohm and William Isaacs who founded the dialogue project at MIT and introduced Bohm's dialogue practice into organizational settings. Whilst "dialogue" and "conversation" appear similar concepts there are significant differences in their use. Bohm advocates special forms of dialogue with particular disciplines and a particular way of making sense of things. Whereas Shaw is "not trying to foster a special form or discipline of conversation". She encourages "people to rely less on pre-set agendas and ready made presentations and to engage one another in exploratory conversations that generate stability and potential shifts in what we are holding one another to and how we are doing that". p164 cf pp 161-164

21. ibid., for quotations in this section see pp124, cf 73 and 160. See also: Stacey, Ralph D (2001) *Complex Responsive Processes in Organizations: Learning and Knowledge Creation* (Routledge) p7

22. Stacey, Ralph D (2001) *Complex Responsive Process in Organizations* pp61-62

23. ibid., p64

24. ibid., p63

25. Battram, Arthur (1998) *Navigating Complexity* (The Industrial Society) p139

26. ibid., pp142-143

27. ibid., p140

28. ibid., p140

29. Shaw, Patricia (2002) *Changing Conversations in Organizations,* p 66

30. ibid., pp66-67

31. ibid., pp67-68 for the quotations in this paragraph

32. ibid., p68
33. ibid., p69
34. ibid., pp125-170
35. ibid., for this paragraph see p125
36. ibid., p126
37. ibid., pp126-127
38. ibid., pp127-129
39. ibid., p128
40. ibid., p129
41. ibid., pp130-132
42. ibid., p132
43. ibid., p132, cf p30
44. ibid., pp136-137 from which other quotations in this section are taken
45. ibid., p137
46. ibid., pp137-138
47. ibid., p138 for quotations in this paragraph
48. ibid., p138
49. ibid., pp142-152
50. ibid., p142
51. ibid., p146
52. ibid., p148
53. ibid., p149
54. ibid., p150
55. ibid., pp152-161
56. ibid., pp152 and 153
57. ibid., pp160-161 and 153
58. ibid., p155
59. ibid., p157
60. ibid., pp157-159
61. ibid., p160
62. ibid., p1 for the quotations in this section
63. ibid., pp1-3
64. ibid., pp70-71
65. ibid., p48
66. ibid., cf pp48 and 49
67. ibid., p69
68. ibid., p151 cf p 45
69. ibid., p152
70. ibid., p150
71. ibid., p172
72. ibid., quotations in this section from p70
73. quotations in this section pp59-60
74. ibid., p121

References and Notes: Model Two: Consulting at the Edge of Chaos

1. Cosstick, Vicky, *Working at the Edge of Chaos: An action research approach to facilitating change in the local church [deanery] using complexity theory.* A dissertation submitted to the School of Educational Studies, University of Surrey, in partial fulfilment of the requirements for the degree of Master of Science in Change Agent Skills and Strategies in June 2002.
2. ibid., p ii
3. ibid., p99
4. ibid., pp13-14 for quotation in this paragraph
5. ibid., p16 for quotations in this paragraph
6. ibid., p25
7. ibid., p20, cf pp 16-17
8. ibid., p20
9. ibid., p26-30
10. ibid., pp27-28
11. ibid., p92
12. ibid., p92
13. ibid., p93
14. ibid., p93 et al
15. ibid., pp38, 94 et al
16. ibid., p92
17. ibid., p26-28 cf p90
18. ibid., p29
19. ibid., pp 29-30
20. ibid., p99
21. ibid., p97 for this paragraph see pp31-38, 80-97