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## If you're a fish, what can you know about the water?

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# If you're a fish, what can you know about the water?

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*The authors of this paper have been engaged in Systems Thinking, Systems Practice and Systems Teaching for many years. In this paper they reflect on their experience of engaging systemically with their own organisation in order to bring about change. Re-structuring the Systems Department of the UK's Open University to create new sites for emergence of fresh ideas, interests and enthusiasms raised questions about meaning and purpose as well as theoretical questions about practice. The authors describe their own attempts to answer these questions and to manage their own evolving understandings and emotionings by reflecting on some critical incidents.*

In writing this paper we ask ourselves the following question:

What does it mean to facilitate systemic change in a context one is deeply embedded in and how do Systems Practitioners recognize and account for the traps set by their own traditions of understanding as they struggle to understand their own milieu?

We attempt to answer this question for ourselves by reflecting on our experiences of practicing Systems in our own academic department: what can we know about the water we are swimming in?.

## **Immersion in traditions**

Each systems practitioner brings their own traditions of understanding, and their own history to any situation in which he or she wishes to take purposeful action. Following Ison and Russell (2000, p.3) we accept that understandings grow out of a tradition - a network of prejudices (literally understood as *pre-understandings*) that provide possible answers and strategies for action in a context. History, for us, has a biological and social basis that is explained by Maturana's (1988) concept of structural coupling.

Based on our reflections we will argue that effective systems practice requires practitioners to recognize the interplay of history and tradition with respect to practitioner and situation (Figure 1). Any situation has a history that is open to inquiry but the ways in which that history is interpreted is contingent on the traditions of the interpreter(s). The range of options available to the systems practitioner is limited, at

least in part, by what the practitioner is able to perceive. This limitation applies both to the situation, and to his or her own capacity for action. It is because the range of options for systemic action arises in the relationship between the practitioner and the situation that we wish to draw attention to this aspect of practice.



**Figure 1:**

Systems practitioners bring their own history and traditions to the situation in which they wish to take purposeful action. The situation too has a history. The figures in this diagram are specifically the authors and remind us that our observations and theoretical constructions have to be coherent with our own experiences as practitioners.

Recognizing and evaluating options for purposeful action in a situation is constrained because what the practitioner is able to perceive is conditioned by his or her history and traditions of understanding. Any attempt to account for their own history and traditions is likely to be difficult but, where attempted, offers the possibility of recognizing more options in a given situation.

This is not straightforward. A narrative account of one's own history arises from the sense one is able to make of experience but will include, and be structured by, assumptions arising from personal history and traditions of understanding. But there are two types of 'blind spots' in the systems practitioner's perception - those that he or she recognizes as blind spots and those that he or she has no awareness of as blind spots. The 'content' of both types of blind spot is, of course, unavailable to the practitioner.

Because narrative accounts will not include insights and perspectives that are not part of the practitioner's history or traditions, parts of the situation are not available to perception. Furthermore, the practitioner cannot be fully aware of the totality of what is excluded from his or her perception of the situation. On the basis of reflections on our own practice we are aware that our perceptions of our situation are limited by our individual histories and traditions and, to an unknown extent, by our history of working together as systems practitioners. One can speculate that working together reinforces the inaccessibility of those assumptions we hold in common but facilitates the emergence into awareness of some aspects of our history and traditions of understanding that each of us has but which is not included in our individual narratives or accounts.

### *Our traditions*

Rosalind accounts for her history as follows:

1. a family background of commitment to social action, informed by Christian values and socialist politics;
2. a university degree in engineering and experience of working in the UK power plant industry;
3. developing awareness of the limitations of the engineering and scientific-rational paradigm for solving human problems;
4. an interest - developed by being a lecturer at the UK's Open University - in learning and its capacity for liberating a person's sense of self-worth when something 'difficult' is achieved;
5. an experience of personal emotional and cognitive crises that resulted in, among other things, a move towards systems thinking;
6. a commitment to integrating interests in Systems; personal development and counseling; facilitation and process design; supporting the emergence of working environments that enable meaningful engagement with work.

Reflecting on her history, Rosalind notices the following as being relevant to the current reflection.

- an awareness that many of the issues around enabling humans to work together cannot be addressed within a positivist paradigm and
- a change in her own ways of understanding from a moderately positivist epistemology to an understanding that her ways of knowing emerge from experience that itself emerges from a particular way of understanding.

Relevant milestones in Ray's history include

1. a family background in farming and university degree in agricultural science;
2. experiences of the cultural dimensions of agriculture through working in Bali and Tanzania;
3. awareness that many development experiments in poorer countries were failures of the developers' models of understanding of development, learning and participation;
4. an interest in learning and how it is enabled in University settings - first in student-centered curricula at the University of Western Sydney (Hawkesbury) then the University of Sydney and latterly at The Open University, UK;
5. an increasing concern with systems thinking and systemic action research since 1985 which culminated in a move to the UK from Australia in 1994; and
6. a choice made in my academic practice to abandon the high ground of technical rationality for the swamp of real-life messes (Schön, 1995).

On reflection Ray would draw attention to the following changes in his tradition of understanding:

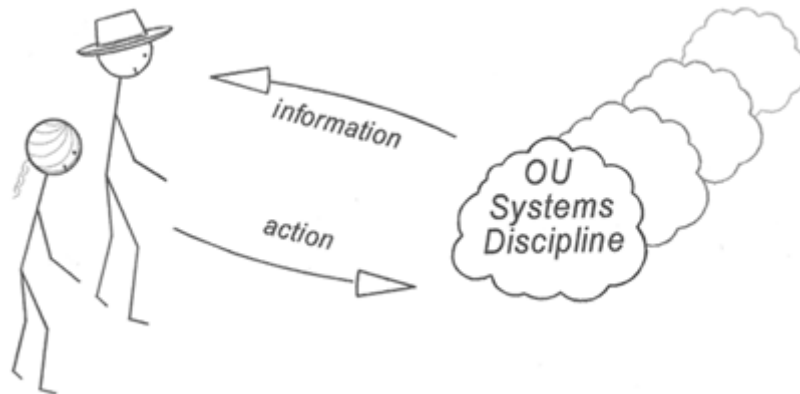
- an early concern, not then explored, that his economics courses contained no humanity;
- an awakening to the systemic nature of agriculturally related R&D;
- a personal transition in my professional concerns from grassland ecophysiological, to grassland agronomist, to a concern with grasslands as human activity systems (which existed), to a concern with grasslands as socially constructed systems and R&D as a second-order researching system (e.g.

Pearson & Ison, 1997; Ison & Russell, 2000). In many ways this is an epistemological journey.

### Immersion in context

Figure 1 shows two systems practitioners bringing their history and traditions into engagement with a complex 'real world' situation, in our case the academic department in which we work. This is one of the 'real world' situations where we have been trying to take purposeful systemic action over the last seven years.

Armson argues elsewhere (Armson, 1997) that a figure like Figure 2 is inadequate as a representation of any experience of systems practice, but its deficiencies become vivid as a model of systems practice, as we perceive it, when one is practicing systems in one's own milieu. As members of the OU Systems Discipline we are clearly *part of the situation*. We are not external agents as suggested by Figure 2. We are, rather, acting from within it both as systems practitioners and as stakeholders in the discipline and its future evolution.

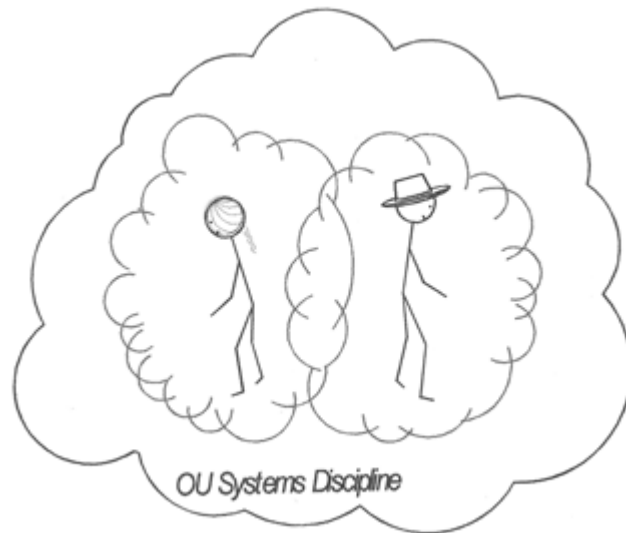


**Figure 2:**

A traditional model of two systems practitioners encountering a 'real world' complex situation.

Figure 2 also represents a relationship between self and situation that we do not find in our own experience of trying to effect change in our own milieu. It suggests a privileged view of the situation, a dispassionate intervention and one in which the systems practitioner is able to 'act from the outside' in ways that are not constrained by the complexity we have experienced inside the situation.

Figure 3 shows us, as systems practitioners, immersed in our current work context. In this representation we are immersed, first in our traditions and histories (with some shared components) and then within the situation in which we wish to take purposeful action. The 'nimbus' of the systems practitioner's own traditions and history mediates everything that he or she is able to perceive about the situation in which he or she is immersed. The boundaries of the nimbus are not fully known nor is the extent to which it illuminates or obscures the situation fully known.



**Figure 3:**

As systems practitioners taking purposeful systemic action in our own milieu, we are immersed in our own histories and traditions of understanding. There are common elements of our history and our conversations reveal common enthusiasms for action which are informed by our intellectual traditions.

Against the background of this theoretical understanding we have experienced self-as-systems-practitioner frequently at odds with self-as-stakeholder in ways that are intellectually and emotionally demanding. In the next section we describe some critical incidents which have arisen in our practice whilst working in our own academic milieu to create capacities for responding to our changing environment.

### **Critical incidents**

Out of the many ways we could have told stories about our engagement with our own context, we have chosen a number of incidents. We tell these stories from our own perspectives and, in taking responsibility for these stories acknowledge that other people in the situations might have chosen other incidents (from their perspectives on our engagement) or chosen other ways to recount those incidents (from their perspective on the incident). The incidents we have chosen are ones that we define as 'critical incidents'. We define critical incidents as those incidents that, on reflection, are seen to have triggered renewed commitment to action.

The critical incidents we relate take place within an historical context. This context is related below. This too is an account from a limited perspective.

#### *Systems Department, Systems Discipline: history and traditions*

The progenitor of the current Systems Discipline was set up as part of the Open University's Technology Faculty. It was the vision of the founding father of the faculty, Geoff Hollister, that the OU Technology Faculty would transcend the normal boundaries of an engineering-based technology faculty. It would provide students with an opportunity to bring together a range of engineering and modeling skills to design systemic solutions for human problems. The Systems Discipline is what has been conserved of this vision and is located in a faculty that also includes a Design Discipline as well as three engineering-based departments.

The Systems Discipline is unique in that it has taught Systems at degree level within an applied systems framework for nearly 30 years. In this period over 20,000 undergraduates and associate students have taken one of the Department's major Systems courses and many more students have been introduced to Systems ideas through the Technology Foundation courses. It is generally recognized that this Open University teaching material has been widely disseminated and used to guide curricula in other institutions. The current Systems Discipline is one of the largest Systems academic groupings in Europe and possibly beyond with 16 academic staff and a total staff complement of about 30 people. Since inception staff have been drawn from a broad range of academic disciplines, including over the years, history, law, philosophy, psychology, engineering, mathematics, operations research, physics, geography, agronomy, biology and others.

Our experience since 1973, when the original Open University Systems Group was founded, is that students feel excited by Systems courses because they open up a whole new way of thinking or, in some cases, because it validates the way they already see the world. Our courses equip individuals for managing complexity and change in both organizational settings and in their own lives. Systems courses are also concerned with effecting change - managing - in their own systems practice, in institutional settings, technology (information systems) and the environment in the context of "sustainable development".

Recent achievements include:

- 10,795 students successfully completed the course 'Complexity Management & Change. A Systems Approach' (T301) from 1983 - 99;
- 1,006 students had claimed the Undergraduate Diploma in Systems Practice award a year after its introduction in 1998.
- 12,000 students this year are studying the web-delivered course 'You, your computer and the net' (T171) which introduces some systems thinking concepts;
- Over 600 post-graduate students have studied the core module: 'Environmental decision making. A systems approach' (T860) since 1997 when the EDM program was introduced.

Whilst our recent achievements are impressive they have not come easily. Despite its historical academic success (see Maiteny & Ison 2000 for a more detailed account), a number of problems began to emerge during the 1980s and early 1990s. These have been easier to recognize in retrospect than they were at the time when they began to emerge. Over the years a number of additional academic interests were grafted onto the Systems group. A small but internationally successful Development Policy and Practice group was offered an academic 'home' in the Systems Department. A number of academic staff who had interests in common with some of the Systems Discipline were also offered an academic home. Arguably these graftings were possible, or seemed sensible, because the Department was already staffed by an eclectic mix of academics. It may also be that since Systems was seen as 'content free', and its

academic interests were not understood or appreciated by the rest of the faculty, the Department was seen as capable of accommodating any interdisciplinary interests.

Over the years, and visibly by the mid 1990s, its history of success, its diversity of academic interests, and the membership of a number of staff who had either no, or a peripheral, commitment to Systems, meant that the Department had insufficient internal coherence to respond to an increasingly demanding environment. A *laissez-faire* style of decision-making and governance meant that important issues were being neglected and it was becoming increasingly difficult to articulate, and elicit a commitment to, the Department's core activities. A collective preference for dispersed decision-making made leadership difficult while those taking on responsibility had limited sanction for action.

*Critical Incident 1: Ray's account of his appointment, arrival and induction interviews*

I came to the Open University for many reasons. One was my belief that the dominant model of "the University", as an institution, was dangerously hegemonic. Having experienced the dissolution of the binary divide of Higher Education in both Australia and the UK and having experience of many poorer country universities it seemed to me that the Oxbridge model, with minor variations, was pervasive. In my experience, the University sector was (and is) characterized by:

1. lack of diversity,
2. lack of awareness of the extent to which universities are constructed around particular social technologies (see Postman, 1992);
3. little appreciation of the rapidly changing operating environment (fiscally, demographically, technologically and theoretically - for my own perspectives see Humphreys & Ison, 1993; Ison, 1989; 1990; 1994a; 1999; 2000; Pearson & Ison 1990, 1992).

My question was, and remains; are "universities" as most of us know them on a trajectory towards extinction or are there new forms which will co-evolve with the rapidly changing environment? More specifically I was concerned about whether the OU was a progenitor of one of these new forms and if so what the future key design features were likely to be?

Much of my first year in the OU I spent trying to understand the OU as a "system". Such a process involves a lot more than compiling and analyzing the facts and figures. It involved listening to people, particularly their stories of the past and present and creating the space for them to give voice to their aspirations for the future. I had come to the OU with a research background in which one of my main concerns had been the development of designs for researching *with*, as opposed to *on*, people (see Ison and Russell, 2000). Understandably my starting point was within the then Systems Department but my appreciation of my new context also involved moving beyond the central Walton Hall campus, meeting with students, alumni and tutors.



Before taking up my post as Professor of Systems I had been told by some that the group of Systems staff at the OU were delightful people but fragile and disaffected. There were also suggestions of residual unresolved issues associated with past professors. Through my appointment process it became apparent that any attempts at authoritarian or hierarchical leadership would be both unworkable and unacceptable. This suited my own style and preferences and is one of the reasons I was appointed.

Prior to joining the OU I had been involved in developing a research approach in which we (see Russell & Ison 2000; Ison & Russell 2000) wanted to incorporate the idea that *enthusiasm* was a phenomenon at the core of social life. Enthusiasm has several facets: an intellectual notion or a theory; an emotion or a driving force (not necessarily connected to any reality-testing process); and a methodology of how to do something (an observable strategy to go from A to B). As an intellectual or theoretical notion, the meaning of the word *enthusiasm* goes back to the Greek words *εν* (en), meaning *within*, and *θεος* (theos) meaning *god*. So the word captures the notion of *a god within* as distinct from the source of all understanding being from without. The emotion or driving force idea of enthusiasm has always been central in psychology. Motivation has been understood as a drive from within that then is satisfied by whatever you are doing outside. Methodologically we had been concerned with identifying processes that might trigger the emergence of enthusiasm within a designed process that enabled people with common enthusiasms to work together.

Our research had shown that providing people with the experience of being actively listened to and in which stories of their past, present and anticipated future had been elicited was one possible route to triggering enthusiasm. With this experience behind me I embarked on a round of 'interviews' with all staff in the then Systems Department in the first three months of 1994 as well as a number of staff outside the Department (see Ison *in preparation*).

A key systems notion is that we all bring different *perspectives* to a situation. Systems thinking enables those in a problem situation to draw on these multiple perspectives and by using systems concepts (e.g. *boundaries* and *emergent properties*) to construct or model possible "systems". Systems has also been described as a science of relationships. It is not the entities in the system that are a focus of concern but the relationships between them. The quality and nature of the relationships between elements in a system become variables to be researched and understood. My interviews were designed to enhance my own understanding of the quality of relationships between certain parts of "my" evolving 'OU system' as well as surfacing latent enthusiasms and concerns. This included the myths and metaphors which characterized the then situation in the Department and the organization individuals recognized as the OU.

Following my interviews a workshop was organized and conducted (see Ison, 1994) to mirror back my interpretations of what I had learnt in a process designed to enable those in the group to take collective responsibility for agreed upon actions. The workshop was designed as a celebration of the department's 21<sup>st</sup> anniversary - a coming of age that had gone unnoticed by most. In all there were 44 staff present at the workshop held away from the campus in Stony Stratford. One of my new colleagues said to me as he sat down for lunch: "*Gee Ray, there are people here I thought were dead!*"

A number of clear "projects" or "initiatives" emerged from the workshop; Table 1 shows the result of a ranking of the strategic issues facing Systems as prioritized by participating staff in 1994. Clearly "communication" was the big issue.

**Table 1:**  
**Results of individual rankings of the three most significant strategic issues facing the Systems Department**  
 (see Ison 1994 for more details)

<b>Issue or Theme</b>	<b>1st Priority (Yellow)</b>	<b>2nd Priority (Red)</b>	<b>3rd Priority (Green)</b>	<b>Total</b>
Communications	13	3	4	49
Contract Workers	3	8	7	32
Group Image	5	2	7	26
Course Production etc.	2	7	2	22
"There is a need for a more international perspective"	2	4	4	18
Strategy	2	4	4	18
Resources (People, time, money) - Energy, Enthusiasm	3	2	4	17
"Building a better confederation" or federation (?)	2		2	8
"Enthusiasm is what it is all about".	1	2		7
Systems Thinking	1	2		7
"Computers and IT in our courses"	1	1		5
"Student experience of our courses and "teaching" quality"	1	1		5
"The new technologies have lead to different working relationships"	1	1		5
"Research is needed for intellectual regeneration"	1			3
"Upstairs and downstairs" "There is a boundary three steps down from the MMT [one of the department's projects and, by extension, the group of people most intensely engaged with it] corner"			3	3
"We are hijacked by the doing rather than the thinking".	1			3
Maintenance vs. Continuous Updating (new initiatives)	1			3
"New course initiatives and rewrites"	1			3
Appointments on "soft" money		1		2
"Projects currently on the go"		1		2
"Issues within the OU system"		1		2
"External input into the debate is important"			1	1
"We used to thresh courses to death... to life!" "Courses need no longer be tablets of stone."			1	1

"Of course we never talk to each other in this place".			1	1
"Managing systems is like herding cats"				
Skills/Abilities/Training				
"Our strength was teaching management"				
"Academic staff often do a disappearing act in maintenance roles"				
The amount of outstanding study leave				

In the final session of the workshop individuals were invited to form clusters around particular actions they were keen to pursue. Each group provided a summary of their group discussions and decisions. One of the largest groups formed around the theme 'Communications'. There was clearly a great deal of concern but also some energy to do something about this issue, keeping in mind of course one observer's note of caution on the day regarding a frequent tendency to hide a multitude of issues under the banner of "communication problems". For this reason I distributed to all staff the paper entitled "Major metaphors of communication and some constructivist reflections on their use" (Krippendorf, 1993).

This was a critical incident in that the event and its design released a lot of enthusiasm among participants and there was at least an espoused commitment to a series of actions for which individuals had taken responsibility. This provided an agenda for change.

#### *Critical incident 2: Ray's account of the 'polo mint' metaphor*

In a note to me following the workshop Rosalind Armson made the following points which I believed to be worthy of sharing more generally and thus I incorporated her points in the workshop report (Ison, 1994). Commenting on an emergent sense that the Department 'had a hole in its middle', Rosalind's note was entitled: *'Initial Responses: On Polo Mints and Coming of Age'*. She said:

These thoughts are presented in the spirit of exploring the analogy of the polo mint. Whether or not Systems is a polo mint I don't know. The image of the polo in Systems goes back at least 15 years when I remember having a conversation with a member of Systems who was complaining that GS [General Systems] theory was like a doughnut - it didn't have a centre. Since then, I have heard this image used to describe the social structure of the group, its course profile and its academic *raison d'être*.

#### *The polo mint in the Systems mythos*

The recurrence of this image over such a long period, and its appearance as a continuing part of the group's self image, suggests a long-standing sense of emptiness or incompleteness. JJN[] put his finger on it when he suggested that this was a sense of yearning. The application of the image in such a range of contexts suggests further that the group (or perhaps that should be the people in the group?) have not really identified the object of that yearning. This reminds me that a recurring theme in folklore is that coming-of-age almost always involves setting out on a quest to recover

something of immense value. (It's interesting that the quest is almost always one of recovery rather than discovery). This is now most commonly interpreted as the search for the 'true self' or soul. Is this task to be part of Systems' coming of age? [Warning: the soul is usually guarded by fierce dragons who must either be killed (the option usually favoured by princes) or tamed (the option mostly favoured by princesses)}. There are serious consequences attached to refusing the quest or of turning back - disinheritance as well as anomie.

### *The village green*

The hole-in-the-middle need not be seen only as gap-to-be-filled. It can also be seen as eye-of-the-storm or as protected space. The village green is a hole in the centre of the village maintained as common land. As such it has immense value. It may be that we need the hole in the middle of Systems as a space into which we project our images of Systems (both as subject and as OU Systems Group). It is a space into which I can project my idealism, my reasons for being here, my visions etc. (It is also a space for projecting my disaffections and blame stories.) There they are protected from violation by a too-close encounter with any reality and they can safely coexist with whatever anybody else is projecting into the space. In this image any attempt to put anything into the gap would be a real tragedy of the commons.

### *Engineering analysis*

In engineering terms an annulus (a polo) is much more interesting and useful than a disc. It can absorb, store and maintain very much more energy than a disc (this is why wheels are structured so that as much of their mass as possible is located at the rim). An annulus can withstand much stronger internal and external forces without damage. The implications of this are obvious since forces and energy map quite closely between common usage and engineering.

One of the implications of an annular structure is that the only connection each element in the structure has to the whole is through immediately adjacent elements. The circular shape and the cohesiveness is an emergent property of the connectedness of each element to only a very small number of other elements. An implication of this metaphor is that there will be very little contact across the annulus. That's why it works. But it means that Systems people may have to come to terms with feeling 'peripheralised'. The experience of feeling that I am 'not really in the mainstream' or not really legitimate seems to be quite widely shared (including by people who I see as much more in the mainstream than I am).

But what about a bicycle wheel? The bicycle wheel is a truly wonderful engineering design. The spokes connecting each part of the rim to the centre might suggest a greater connectivity than there really is. It should be observed that the function of the spokes is primarily to transmit external forces to the periphery. Centres can be sources of stress!

Rosalind concluded that

there probably is some sense of yearning or of something missing that needs to be addressed. It may be that the quest for this is part of our task for the next few years.

It's not clear that a hole-in-the-middle is of itself a bad thing. It allows us to be flexible and absorb stresses without damage. It provides space for vision and fantasy. It could be visioned as a womb where exciting things are nurtured to emergence.

The conversation that was triggered by Rosalind's note was another critical incident for me. It was an example of feedback in response to my invitation that, for me, showed creative insight and comprehension of the issues. It was to lead to an on-going conversation about these issues triggered by my experience of being listened to and acknowledged.

In subsequent discussions we developed the following model (Figure 4). The spiral around the annulus represented for me an interconnected series of "learning" or "research" cycles. Following from Rosalind's "village green" metaphor the centre could be, amongst other things, a site for our critical reflections, the sharing of our learnings, or a site for our scholarship. "Scholarship" and "scholar" are both derived from the Greek *σκολη* (skhole), meaning leisure. Leisure in Ancient Greece was largely devoted to discussion, hence *scholar*. The issues associated with this exploration of possible new metaphors is taken up in Armson and Ison (1995).



**Figure 4:**

The spiral annulus - an elaboration of the polo-mint metaphor.

In my report on the workshop I invited members of the Department to reflect on this metaphor. To consider the question: "What would we need to do 'to manage the center'"? Also to reflect on the number and coherence of the "projects" which constitute the annulus.

I did not become Head of the Department officially until the end of 1994. Over the next three years I proceeded to work with staff in an attempt to address the issues that had been surfaced at the workshop. The lack of support mechanisms in place for the Head of Department role did not make this easy - in fact it turned out to be unsustainable for me (and latterly Rosalind despite changes made in the intervening period). In September 1995 in response to my ongoing concerns about the poor quality of relationships amongst members of the Department and the lack of both structure and direction, I organized a three day conference retreat at Clare College at the University of Cambridge entitled: *Systems: Beyond the Polo-Mint, question - mark!* The event was designed so that a number of external visitors (critical friends) could be present and make contributions about our work as well as seeding new perspectives.

The outcomes of this workshop have been recorded but not widely distributed because of the impact of what emerged on the final day of this event. A strong conviction

emerged amongst part of the Department that it was necessary for a split to occur - expressed as that sub-group's desire for another sub-group to leave. I do not propose to dwell on this outcome here other than to make two points. Firstly, after a short time I began to view this as a very positive outcome. It satisfied my criteria of managing for emergence. Secondly, it triggered a very demanding period of managing that did not reach any tangible resolution until the end of 1997. In reflection the main organizing metaphor for me throughout that period was 'staying in the conversation'. It was in this period that the critical incident Rosalind is choosing to reflect upon occurred.

### *Critical incident 3: Rosalind's account of a meeting of the Senior Lecturers*

I joined the Systems Department from one of the Technology Faculty's Engineering departments. I had joined because, after a personal crisis, I needed an alternative academic home and was working with a number of Systems people on the Faculty's Foundation course. I was one of the first people 'grafted' into the department. Systems thinking was a revelation to me and enabled me to integrate a number of previously separate strands in my life. One of these was my interest in process design and facilitation, in which I had developed a local reputation as a part-time consultant. It was largely because it allowed me to integrate so many previously disparate interests, and because it gave me capacities to address some of the issues that had troubled me as an engineer, that I became committed to systems thinking and practice. It took me a long time to develop any self confidence as a systems thinker however and, at the time of which we are writing, I still felt I had only a very flimsy grasp of Systems' core concepts.

When Ray arrived as the new Professor of Systems, it was clear that we had interests in common, not least interests in improving the quality of the Department's academic life and in process design. We also shared a common epistemology - mine developed through reflection on experience. I felt listened to when I was 'interviewed' by Ray as he sought to construct his view of the Department. I felt welcomed into the conversations that he subsequently sought to initiate and concerned that so few others seemed to have accepted the invitation. I was also acutely aware of how unhappy many people were about the quality of our working lives together and I was concerned for the then Head of Department who was trying to hold the tensions in an increasingly factionalized department. When Ray took over as Head of Department, a year after his arrival, I was already committed to supporting his efforts to manage for the emergence of new ways of working together.

Following the Clare meeting, the Senior Lecturers (at that time an all-male group of seven-plus-Ray, the Professor, in a department of 22 academic staff) were delegated to generate and present some options for moving forward. They were also asked to address some of the tensions between them that had been revealed by Ray's interviews. Ray approached me after the meeting and asked me if I would be prepared to facilitate a meeting of the Senior Lecturers, explaining that he wanted to be free to participate in the option-generating without the responsibility for the meeting's process. The Senior Lecturers were not prepared to use an external facilitator for this meeting.

I was reluctant to take on the task. I had concerns about whether I would have consent for my facilitation from the Senior Lecturers. Would I, as a Lecturer, be seen as a credible contributor to the meeting's process? It is perhaps symptomatic of the lack of internal coherence that, at that stage, no-one within the department, other than Ray, knew that I was a facilitator. I had concerns about possible effects on my long-term relationships within the group, about how my role would be construed by the Senior Lecturers and by others. I was also concerned about whether there would be sufficient consent for facilitation itself. I was very fond of some of the individuals in the group, some were friends but I noticed that as a group, I had very little faith in their capacity to create new ways forward.

For a mixture of worthy and less worthy motives, I agreed to take the task on. I knew I had something to offer, even though I had little confidence that it would be accepted. My counseling background made me extremely wary of 'practicing on my own patch'. This is usually regarded as both unethical and risky. The client-centered ethic of counseling means that the counselor should be free of any stakeholding in the outcome of any particular engagement. Consciously having a stake in the outcome is thus regarded as unethical because it means that the counselor cannot be fully client-centered. The confusion of motives risks the trust and welfare of client, counselor and others. But I was also flattered to be asked. I also recognized that facilitation is not the same as counseling; that my stakeholding was already clear to all concerned. Above all, I believed I could not legitimately complain about the Department's situation unless I was taking action to do something about it. Many people had been upset by the Clare meeting and dismayed by the tensions between the Senior Lecturers - it was as if the elephants were fighting in the backyard. It felt risky and uncomfortable but I decided I would do it.

The meeting was a bad experience for me:

- I did not detect any consent to facilitation, or willingness to attend to meeting process
- I did not observe, although it may have been there, any commitment to addressing the issues, taking of responsibility or willingness to move beyond blame
- in particular, there appeared to be an unwillingness to address any of the interpersonal issues that had become so visible in the preceding few weeks.

My experience of the meeting confirmed all my prejudices about working in one's own patch. There may have been helpful straws in the wind but I was unable to see them or to catch them. At the end of the meeting, I was weary, angry and disillusioned. I knew I had done what I could but I felt I had failed.

That evening I recognised that I had to do something with the turmoil of emotions that I was experiencing. There was fear for the Department's future, anger towards, and disappointment in, my colleagues, and disillusionment with a group of people for whom I had hitherto had great respect.

I sat down and wrote a letter. Though only two pages it set down exactly what I had experienced that day and my responses to it. It included reflections of my experience of the people concerned in the situation collectively and individually. I wrote, 'in a spirit of affection and despair':

I'm angry and disappointed because you are collectively and individually engaged in self-delusion. Whenever any of you get close to naming an issue that is uncomfortable, you all distance yourselves from it.

I didn't send the letter. I never intended to, although I did read it to Ray a few days later. The writing of it had a powerful effect on me, however. I withdrew the power I had given to the Senior Lecturers to make decisions on my behalf. I withdrew the respect that I had for them as a group. I did not withdraw respect from individuals although it was now clear to me that Senior Lecturer status, as such, did not entitle any of them to any respect other than they had earned through my experience of them and their work. I concluded that if anything was going to change, then it would not be through the collective action of the Senior Lecturers. I was forced to recognize that if anything was going to change then I might have to take a leading role. I had already come too far to reverse my commitment.

On reflection, it was also clear that my experience meant that external facilitation was going to be necessary. I would not be able to support any other member of the Department in doing what I had attempted to do. The emotional demands were unlikely to be sustainable for anyone who was attempting to manage their own emotionings as well as emotionally-charged meetings.

### **What happened next**

Our reflections above relate only a few of many critical incidents in a change process in which we were intimately involved between 1994 and late 1997. Each had the effect of triggering on-going commitment to action - to staying in the conversation. By mid 1997 all in the then Department had a strong desire for a form of closure on the main issues that had been surfaced. As reported elsewhere (Armson & Ison, in preparation) this was achieved with the formation in late 1997 (operational in 1998) of the Center for Complexity and Change as a new organization to replace the then Systems Department. This change in organization, structure and in boundaries to our systems of interest as well as creating the new Center and three constituent Disciplines (Development Policy and Practice (DPP), Systems, and Technology and Manufacturing Management (TMM) was designed to change the underlying emotioning and network of conversations. Most would agree that this has worked well to date.

### **Synopsis of implications for our continuing praxis**

In the beginning of this paper we set ourselves the following question: *What does it mean to facilitate systemic change in a context one is deeply embedded in and how do Systems Practitioners recognize and account for the traps set by their own traditions of understanding as they struggle to understand their own milieu?*



Based on our experience of working for change within our own academic department, we find that a number of issues emerge when systems practitioners work in their own milieu. The emergence of meaning is an on-going process so we do not claim a final resolution of the issues we address. We do claim, however, that these issues need to be accounted for by the systems practitioner *as part of the complex 'real-world' situation he or she is working with*. We further claim that epistemological awareness is essential for taking such account.

The following observations and learnings emerge for us from our engagement with our own context.

- This paper's narratives of our engagement with our own academic department are a selection from many possible stories we can tell about experiences. We have chosen to describe our engagement in terms of 'critical incidents'. It is only one possible selection from our own narratives. Other people in the 'real-world' situation we have described would tell yet other stories. In telling these stories we are aware that we are still struggling with the issue of how to take responsibility for relating narratives from a milieu in which many narratives co-exist. It is important to us that we keep our own narratives separate from statements about the way things are'. For example, when drafting her account of the Senior Lecturer's meeting, Rosalind was concerned about the ethics of telling a story that seemed to cast the Senior Lecturers in a bad light. In discussion with Ray, the problem was resolved by telling the story of 'a meeting that Rosalind experienced as going badly', rather than telling the story of 'a meeting that went badly'. Part of managing for emergence is to make clear where responsibility (and response-ability) for a narrative lies. Not to do so risks colluding in the mismanagement of responsibility.
- We find the theme of *managing for emergence* recurs as we attempt to braid theory and practice within our own context. Although this style of leadership is not always understood by other stakeholders in the situation, we remain convinced that this is the only ethical way of working with our academic colleagues. Managing for emergence was part of the design of the meeting at Clare College and the meeting at Stony Stratford.
- Managing for emergence within an academic context has meant enabling conversations, through maintaining an open and inviting *community of conversation* (Wenger, 1998) and a commitment to staying in the conversation, even when this is difficult or demanding. This means that the Systems practitioner has a responsibility for developing process skills. We have sought to fulfill this obligation by engaging in research and consultancy activities that enable us to develop our own and others' process skills.
- We experience working within our own milieu as emotionally as well as intellectually demanding. Our own short-term goals and political agendas as stakeholders need separate management from our systemic aim of managing for emergence. This is emotionally and physiologically draining. The emotioning and emotional needs of the systems practitioner are not external to the situation, nor are their stakeholdings. They are part of the experienced complexity of the situation and therefore need to be accounted for and

managed. In particular we experience the 'truth option' (Heron, 1999) as scary and acknowledge that we have sometimes backed away from using it in the interests of preserving relationships with colleagues (as, for example in Rosalind's decision not to send her letter to the Senior Lecturers).

- We have tried to create spaces in which differences can be valued. We have not experienced many conversations in the discipline about organizational development as embodying communications competence. We also experience failure to distinguish, in action, between critique and criticism and surmise that this is attributable to unresolved epistemological issues. We also observe that a systemic awareness of cultural and institutional issues is often missing from these conversations - another example of the difficulty the metaphorical fish experience in attempting to understand the water. This means that we have not been able to realize our design aim of creating spaces where difference can be valued. The issue of improved communication emerged in the list generated at Stony Stratford (Table 1) but while other issues have been addressed and in some cases resolved, this one remains an outstanding issue.
- Improving systems practice is supported in a conversational milieu in which feedback from other perspectives can be given and received. Good working partnerships are a means of receiving feedback but run the corresponding risk of 'group think'.
- We observe that issues of power arise when practicing in one's own milieu. This concerns the mismatch between perceived power, usually related to position, and personal power that comes with a willingness and commitment to taking action. The mismatch in perception may occur with the individual who may or may not have power and in the perception of other people having power or not. For example, Rosalind's account of taking power to act may be interpreted as an instance of becoming aware of the water. The lack of awareness of power to act will clearly limit the range of options the systems practitioner is able to perceive and will inhibit their capacity for action.
- We are aware that we cannot be fully aware of the situation in which we wish to take purposeful action. Working as a pair enables us to be more aware of the situation in which we are working and enables each to identify some of the other's blind spots. However, we are aware that this carries the corresponding danger that we will get into 'group think' - reinforcing each other's prejudices. This is likely to be compounded when some of those prejudices relate to our stakeholdings in the situation. An epistemological awareness that such prejudices and 'blind spots' will exist may allow the systems practitioner some capacity for avoiding the difficulties they cause by triggering reflections on experience.
- Practicing within our own milieu has highlighted the difficulties encountered when epistemological differences are not recognized or acknowledged by stakeholders in the situation. Epistemological awareness - knowing that we cannot be fully aware of the water we swim in - allows differences to be discussed and valued. Without such awareness, epistemological differences are seen as conflicts or disagreements without much possibility for moving

forward. Attempts to create conversations that value difference then risk being perceived as devious attempts to advance a particular stakeholder's (the systems practitioner's) interest at the expense of another.

- For this, and other reasons, external assistance is an important option. Recognizing this need was one of the outcomes of Rosalind's experience of the Senior Lecturers' meeting. We later experienced the input of a trusted external facilitator as a crucial turning point on occasions when the separation of our own agendas (and our own emotional needs) could not be separated from the task of facilitating emergence. This option also allows emotional demands to be explicitly addressed rather than being left for attention later while the process of facilitation takes priority.
- Practicing in our own milieu raises issues that are different to those that arise in consultancy interventions (literally understood as 'comings in'). We choose to practice in our own milieu because, despite its difficulties, it represents a coherence between what we espouse in our teaching and the rest of our lives. Living our lives in an ethically responsible, and systemically coherent manner. It is this ethicality that allows for a meaningful professional life where the ethics of praxis is embedded in action rather than a set of principles.

## References

Armson, R., "Beyond the Reflective Practitioner: a third order interpretation of aware practice" in *Creative Systems Practice: proceedings of the Fourth Annual Australia and New Zealand Systems Conference*, University of Western Sydney, Hawkesbury, New South Wales, October 1998.

Armson, R. & Ison, R.L. "Systems and the 'polo mint' metaphor" in *Proceedings of the Fourth International Conference of the UKSS on Critical Issues in Systems Theory and Practice*, Hull, England, 1995,637-642.

Heron, J., *The Complete Facilitator's Handbook*, Kogan Page, London, 1999

Humphreys, C.F. & Ison, R.L., "Meeting the challenge of problem based learning." *Higher Education Research and Development* 12, (1993): 107-111.

Ison, R.L. "Public Hearing and Submission to Senate Standing Committee on Education & Training; Priorities for Reform in Higher Education." *Hansard* 1. (1989): 996-1028.

Ison, R.L. "Teaching threatens sustainable agriculture." *Gatekeeper Series* 21. International Institute for Environment & Development, Sustainable Agriculture Programme: London. (1990)

Ison, R.L. "Designing learning systems: How can systems approaches be applied in the training of research workers and development actors?" in *Proceedings International Symposium on Systems-oriented Research in Agriculture and Rural Development* 2. Lectures and Debates. CIRAD-SAR, Montpellier. 1994: 369-394.

Ison, R.L. "Guest Editorial: Applying systems thinking to higher education." *Special Edition Systems Research & Behavioural Science* 16, (1999): 107-112.

Ison, R.L. & Russell, D.B. "Exploring some distinctions for the design of learning systems." *Cybernetics and Human Knowing*, 7no. 4 (2000): 43-56.

Ison, R.L., and Russell, D., eds. *Agricultural Extension and Rural Development: Breaking out of Traditions*: Cambridge University Press, 2000  
Krippendorf, K. "Major metaphors of communication and some constructivist reflections on their use." *Cybernetics & Human Knowing* 2, (1993): 3-25.

Maiteny, P.T. & Ison, R.L. "Appreciating systems: critical reflections on the changing nature of systems as a discipline in a systems learning society." *Systems Practice & Action Research* 16 no. 4 (2000): 559-586.

Maturana, H., "Reality: The search for objectivity or the quest for a compelling argument." *Irish Journal of Psychology* 9, (1988): 25-82

Pearson, C.J.& Ison, R.L. "Agricultural education in universities: time to ask for whom and how?" *Agricultural Science*, 3, no.4(1990): 24-28.

Pearson, C.J.& Ison, R.L. "University education for multiple-goal agriculture in Australia." *Agricultural Systems*, 38, (1992): 341-362.

Pearson, C.J. and Ison, R.L., *Agronomy of Grasslands Systems*: Cambridge University Press, 1997

Postman, N. *Technopoly: The Surrender of Culture to Technology*: Vintage Books, New York, 1992

Russell, D.B. & Ison, R.L. "Enthusiasm: developing critical action for second-order R&D." in *Agricultural Extension and Rural Development: Breaking out of Traditions*. Cambridge edited by Ison, R.L. & Russell, D.B.: Cambridge University Press, 2000: 136-160

Schön, D.A., "The new scholarship requires a new epistemology." *Change*, November/December, (1995): 27-34

Wenger, E., *Communities of Practice: Learning, Meaning and Identity*: Cambridge University Press, Cambridge, 1998