

SPMC: Experiencing some of the diversity of systems thinking and practice in action

A workshop on 26 April 2002, at LearnMK, Milton Keynes

The first SPMC workshop in May 2000 last year left us with a strong message - the need for practical applications of systems approaches. With this in mind, this next one-day workshop on 26th April this year, was planned as a day of systems practice and application, working in groups on the following topics:

Designing services with children missing from home or care
Organised crime and the formal systems model.
Understanding sustainability
Self-organisation in a NHS Trust
Information systems

These topics were explored in simultaneous mini-workshops led by experienced systems practitioners drawing on their own experience of applying systems ideas to effect change in these areas. We saw the day as an opportunity to experience the fruitfulness of systems as an approach and to lead on to other ways of working systemically.

The workshop leaders were Gerald Midgley on Designing services with children missing from home or care, Trevor Pearce on Organised Crime, Simon Bell on Understanding Sustainability, Patrick Hoverstadt on Self-organisation in a NHS Trust, and Sue Holwell on Information Systems, ..

We aimed for the following outcomes: that participants could

- leave with some systems concepts and skills tout to use straight away;
- look at the complexity they are managing differently;
- build relationships with other members of the SPMC network.

This web report provides brief reports of the activity, including summaries of the day's workshops. I've also added an account of the introductory session, which was a very effective "warm- up" for the day.

Overall, feedback from most participants was very encouraging; participants were able to follow particular interests and particular approaches and the networking opportunities during the day appeared to generate a lot of energy and enthusiasm.

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Introductory session - Ray Ison and Chris Blackmore

This session took participants straight into working with systems with an experiential session on “my journey here today”. Facilitators Ray Ison and Chris Blackmore asked participants to break into small groups of no more than 5 and start by having conversations on “my journey here today” and to record those conversations simultaneously using systems diagrams, e.g. spray diagrams or mind maps. After half an hour diagrams and charts were pinned on walls and groups mingled to discuss the each other’s diagrams.

Participants responded immediately to their briefing and a lively session followed. A rich variety of conversations and diagrams emerged –some reflecting a very immediate approach to the topic focussing on the actual journey between getting up and arriving at the workshop, others taking a broader approach engaging with the events in their lives that led to their being at the workshop.

The resulting group discussion raised a wide range of issues around the use if systems thinking in everyday life. It was an excellent warm-up and icebreaker, which raised energy levels at the start of the day, so that when participants broke into their chosen workshops, they were able to engage immediately.

Workshop sessions reports

Designing services with children missing from home or care, facilitated by Gerald Midgley
Organised Crime, facilitated by Trevor Pearce
Understanding Sustainability, facilitated by Simon Bell
Self-organisation in a NHS Trust, facilitated by Patrick Hoverstadt
Information Systems, facilitated by Sue Holwell

Critical Systems Heuristics in Action:

Designing Services for Children Missing from Home or Care

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Introduction

This workshop was designed to introduce participants to Critical Systems Heuristics (CSH) – a method developed by Ulrich (1983) to support stakeholders in exploring the value and boundary judgements (judgements about the inclusion and exclusion of people and issues) involved in planning. Essentially, CSH offers 12 generic questions about *motivations* for proposed developments, *management and control*, *expertise*, and *social legitimacy*. The questions can be asked about what currently *is* the case and what *ought* to be done. I have used this method many times in my own work (Midgley, 2000), and have found that it empowers ‘ordinary’ citizens with no experience of planning to produce proposals of at least equal competence to those developed by professional planners.

In my view, some rephrasing of the questions is needed before they can be used in practice. This is to make them specifically relevant for local contexts and to enable communication in plain English. However, rephrasing the questions is a relatively easy matter: it just involves thinking about the context in which they are going to be used and ensuring that they are worded appropriately, trying not to make them *so* context-specific that avenues for creative exploration are closed down.

It is important to note that the 12 CSH questions are only a very small part of a whole social theory and methodology advanced by Ulrich. To present the questions in the form of a tool, divorced from their theoretical background, would therefore contradict the spirit of CSH. The whole point of it is to reveal and question the assumptions being made in plans, so to accept CSH without understanding that it makes *its own* assumptions, which can also be opened to question, would be both contradictory and anti-systemic. Also, the 12 questions, presented alone, say nothing about how they can be used in real planning situations. It is for this reason that I started the workshop with (i) a brief overview of some theoretical ideas; (ii) a presentation of the methodology of ‘systemic intervention’ that I use to frame CSH; and (iii) a case study to draw out how the ideas can be practised. We then went into participative group work to try out CSH and reflect on its strengths and weaknesses.

The Presentation

The presentation started with some theoretical ideas. The main issue I focused on is the essential link between boundary and value judgements. Values direct the drawing of the boundaries that determine who and what is going to be included in an intervention. But taken-for-granted boundaries also constrain the values that can possibly emerge. So there’s a tight relationship between boundaries and values, and a systems approach should therefore be

based on reflection on different possibilities for making value and boundary judgements.

I also discussed the nature of rationality. Ulrich (1983) stresses that all rational arguments are phrased in language. This is a social medium, not just a medium for individual reflection. Therefore, rationality is primarily about *dialogue*. So a boundary judgement is (in principle) only rational if it has been agreed in dialogue with all those involved in, and affected by, an intervention. This makes the quality of *participation* particularly important for systems inquiry.

Having introduced these basic issues, I then went on to discuss the methodology of 'systemic intervention' (Midgley, 2000) that I have developed over a number of years to frame and reflect on systemic action research projects in community settings. Within this, I often use ideas from CSH.

A key concept in this methodology is 'boundary critique'. This means reflecting on values and boundary judgements (as already described), and addressing issues of marginalisation in social situations. Another important concept is 'methodological pluralism': learning from other methodologies and drawing upon a wide range of different methods. This way we can develop a more flexible and responsive systems practice than can be achieved by specialisation in the use of just one or two methods. Essentially, CSH provides just one method amongst many that I find valuable – although I draw upon CSH more than most because I have found the questions to be so useful in complex planning situations.

Having explained the methodology of systemic intervention, I then went on to describe an action research project that I carried out in partnership with two colleagues (Alan Boyd and Mandy Brown). This was commissioned by three Manchester-based voluntary organisations, and involved the facilitation of multi-agency working to plan new services for young people (under 16) living on the city streets. I described how we interviewed homeless young people and generated systemic pictures of the problems they face. I also discussed how we synthesised CSH with other methods to facilitate the design of new services. Young people were involved in the design process (drawn from children's homes), as were both statutory agencies (e.g., the Police and health services) and voluntary organisations. It was a long and complex intervention with too many twists and turns to explain in this short article – for more details see Midgley (2000).

The Group Work

To give people a flavour of using CSH, I allocated the participants roles relating to the design of services for children living on the streets. They then worked together to answer the CSH questions, focusing on what services *ought* to be developed. This generated a lot of discussion about prevention versus reaction to existing problems, dealing with child abuse, how to facilitate the involvement of children, etc.

Once people had a feel for the method, I asked them to work in pairs to think about the strengths and weaknesses of CSH, and also to suggest

improvements they would want make to it. They fed back their thoughts to the other participants.

The group work then ended with some more general reflections on the experience of being in the workshop and the methods used to facilitate the participants' learning.

References

Midgley, G. (2000). *Systemic Intervention: Philosophy, Methodology, and Practice*. Kluwer/Plenum, New York.

Ulrich, W. (1983). *Critical Heuristics of Social Planning: A New Approach to Practical Philosophy*. Haupt, Berne.

Organized Crime and the Formal Systems Model, with Trevor Pearce.

The intention of the workshop was to give participants the opportunity to use systems thinking and concepts to examine the phenomenon of organised crime, with a view to identifying intervention opportunities that would aid the development of strategies and approaches that would help disrupt and dismantle this activity. The chosen systems methodology for use in the workshop was the Formal Systems Model, which would be used as a comparative tool

As an introduction to the session the group were asked to give some thought to how they saw complexity embedded in the policing function. The purpose of this was to engage in 'systems' terms and to provide a shared understanding of the law enforcement environment, which sought to counter 'organised crime'. Outside of the well-documented definitions of complexity the group usefully highlighted the following facets of complexity, which they saw existed within the policing context.

- Multiple issues
- Discretion – Reduction and Rules
- Relationships with Government
- Top heavy administration
- Politically charged/attitudes
- Multiple perspectives
- Institutionalisation
- Multiple Expectations
- Building complexity in
- Translating right and wrong

Having explored complexity the group moved on to examine the concept of organised crime. A range of assessments both national and international has indicated that the global cost of organised crime can be expressed as 8% of Global GDP¹. More significantly organised crime impacts negatively upon the lives of individuals through its activities in trafficking drugs, humans and other commodities.

The discussion on the nature and make up of organised crime commenced with a review of the definition given in Article 2, United Nations Convention against Transnational Organised Crime (The Palermo Convention):

“‘Organised Crime Group’ shall mean a structured group of three or more persons, existing for a period of time and acting in concert with the aim of committing one or more serious crimes or offences established in accordance with this convention, in order to obtain directly or indirectly, a financial or other material benefit’

From this the group were able to identify a range of features that might be found within an organised crime group², these included:

- More than three persons
- Involved in serious criminality
- Risk averse
- Engage in corruption
- Separate facets of business
- Create alliances
- Look for opportunities
- Exploitative
- Not randomly formed
- Entrepreneurial
- Licit and illicit activities
- Exercise discipline amongst members
- Create specialisms
- Secretive
- Different Commodities
- Way of life

¹ See for instance the *United Kingdom Threat Assessment 2001* published by the *National Criminal Intelligence Service*, and the *United Nations Convention against Transactional Organised Crime*.

² The term *organised crime group* is used here but equally the same features could apply to what are now being described as *organised crime networks* and *organised crime business groups*.

- Multi –cultural
- Hierarchical
- Business/Free Market
- Ignore Borders
- Operates outside legal structures
- Multi-national

Having identified the above features the group were then asked to model their perception of organised crime through diagramming techniques that they were comfortable to with. These took the form of rich pictures, systems maps, spray diagrams and relationships diagrams .

The group now having a view and perception of organised crime, a method for comparison of the ‘real world’ situation with systems concepts was identified. The chosen methodology was the Formal Systems Model. Checkland³ defines this as:

“A generalised view of any human activity system from a point of view of taking purposeful action in pursuit of a purpose. It may be used to test the basic adequacy of conceptual models.... the model is a compilation of ‘management’ components which arguably have to be present if a set of activities is to comprise a system capable of purposeful activity.”

Therefore it is postulated that a human activity system exists if it has:

- A mission
- A decision making process
- Interacting Components
- A boundary separating the WS and environment
- A guarantee of continuity
- A measure of performance
- Components that themselves are systems
- An existence within a wider system and environment
- Resources at the disposal of the decision making process

The above can be shown in diagrammatic form as a paradigm.⁴

In order for the group to make an effective comparison of what they had identified in respect of organised crime, with the Formal Systems Model they set out in the form of the Formal Systems Model the features of organised crime that had been identified.

This revealed that a number of features of the model were present in organised crime indicating that as such it was potentially efficacious as a human activity system. In particular evidence was found of:

- decision making subsystem
- legitimisation of activity
- provision of resources
- attempts to influence the environment
- communication

Less evidence was found of:

- a wider system
- a performance management sub-system

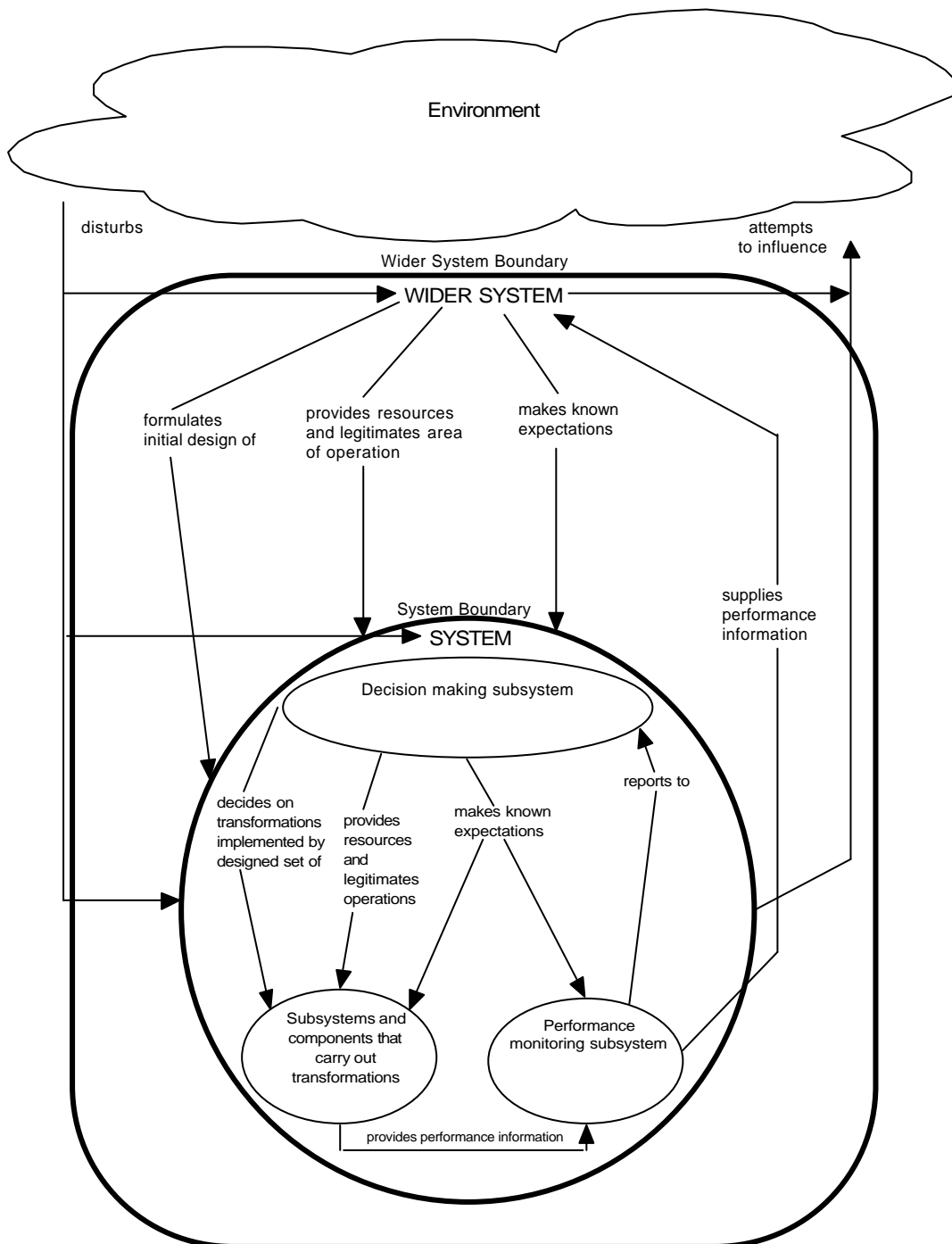
The group recognised that further iterations would need to take place in order to build up a more detailed comparison. However the workshop had shown that comparison of the problem situation with the Formal Systems Model was useful. The group identified that in general terms that organised crime groups had many similarities to legitimate business and that when seeking to disrupt organised criminality there was value in looking at the intervention points which caused systems and businesses to fail, for example:

³ See Checkland PB, 1981, *Systems Thinking, Systems Practice*. Chichester, Wiley)

⁴ See Watson L. (1984) *Systems Paradigms*. (Milton Keynes, Open University)

- lack of strategy
- unfocussed mission
- poor communication
- risk
- competition.

Overall the workshop proved useful, not only in examining and practising a range of systems concepts but also in gaining insight into a significant real world problem which merits further attention from a systems perspective.



Working with Sustainability Indicators, with Simon Bell. 25th June 2002.

Working with Sustainability Indicators (SIs) sounds like a barrel of laughs. I don't think so. 'Indicators' with the related notions of measurement, metrics and numeracy are not exactly a sexy concept. However, beneath the words lies an experience which can be vital, globally relevant and personally engaging.

It was the conventional notion of sustainability indicators that was the inspiration for the attempt by myself and my colleague, Steven Morse of the University of Reading, to challenge orthodoxy and develop an approach to this important process in the understanding of what is sustainability. Our challenge was to develop an approach which was both systemic and participatory (and fun).

In our book of 2000 ('Sustainability Indicators: measuring the immeasurable', Earthscan, London) we developed an argument demonstrating how SIs, as conventionally presented, are reified, intellectual tools developed by experts for experts (to cut to the quick). Yet we contended, they should be valued and of value to all people who take concern for their neighbourhood of planet earth (and planet earth as a whole). They can be means to raise consciousness of global and local issues and means to inform decision makers of what constituencies of opinion value.

The book sold well and our research has progressed. We have completed field work in Malta and our methods are soon to be tested in Lebanon and Algeria.

Down from these global projects, at this workshop we made use of our approach to study the sustainability of lunch! An approach is of no value if it is conceived as being of no value to those using it. So, the participants on the workshop day wanted to think about something of value to them - and lunch was the winning theme. Our approach has the unlovely title of Systemic and Prospective Sustainability Analysis - mercifully this simplifies to SPSA. SPSA is a simple 12 step procedure making use of a range of systems approaches (from Soft Systems Methodology to Active Listening) in order for teams of stakeholders to decide what they think is important to sustain, how they might measure it as an indicator and what such measurement might mean when accomplished.

Lunch was duly assessed. The team argued over what constituted the sustainability of lunch. The calorific value, the means of production, the packaging, the amount and the taste were just some of the issues discussed. At the end of an eventful couple of hours twenty or so SIs were produced - of un-doubted value to all those attending - and some projected values were given. Lunch was seen to be fairly un-sustainable in its current form and suggestions were made for a more sustainable future.

Good fun and good systems practice.

Dr. Simon Bell, Senior Lecturer in Information Systems

Self-organisation in a NHS Trust

Patrick Hoverstadt

In this workshop we explored the use of Beer's Viable System Model in the context of a project in a 5000 staff NHS teaching Hospital. Since one of the dominant themes of the case was to do with the self-organisation⁵ of subsystems and their relationship to the system of which they are a part, we started by agreeing as a group whether or not to accept the remit that we had been given by SPMC. This involved two sets of relationships to be considered, the relationship between the individual delegates as group members, and the relationship between the group and the rest of the conference. What was in question was really whether the group consisted of merely a group of individuals serving their own private purpose, or whether it also compromised a cohesive subsystem of the SPMC system prepared to accept the task asked of it by SPMC.

We proceeded with a brief introduction to the Viable System Model which was unknown to some of the group, but which was familiar to others, and then went on to apply the VSM to the problem situation in the case study. The approach the group followed was unusual, but the same as the one that was used in practice in this project. It was unusual because in the real case, I had access to a lot of detailed information on how the organisation was structured and how it was supposed to work sometime before I had any access to the organisation and its people on the ground. As a result, I analysed the structure using VSM to look for diagnostic points about the system that would account carried out for the emergent properties that had been reported in the presented problem. The presenting problem in this case was extremely nebulous – that the 'medical centre', one of the twelve directorates within the Hospital was "not working well" and that the management and staff within it were "not happy" and "always whinging".

The group went on to use VSM to analyse the structure and quickly started to build two hypothetical models of how the organisation might function. A key point in the analysis was whether the 12 clinical centres containing the 60 'Service Delivery Units' were viable systems in their own right, or merely groupings of systems. The two hypotheses corresponded to this distinction and we went on to look at the emergent properties that we would expect from each of these scenarios. In particular, we looked at the consequences for the SDU's within the troubled Medical Centre on their ability to influence: policy decision making, resourcing decisions, and inter-departmental co-ordination over treatment plans and diagnoses. We briefly explored the specific mechanisms by which the emergent properties would be created in each hypothesis as sets of predictable behavioural responses by key players to systemic conditions. Lastly, the group looked very briefly at the probability that each of these hypothetical models was likely to most accurately reflect reality.

Core to the diagnostic modelling process was the ability of the VSM to usefully model an extremely complex organisation, and to predict emergent properties from that complex system. This case represents a rare example of the VSM's ability to predict the capacity and propensity for self-organisation in complex systems.

Information systems – to follow

⁵ *'Self-Organisation' in this context is used to describe the process of creating a system; essentially the way it is used in complexity theory. It is not used to merely denote 'self-management' of an existing system.*

Workshop Evaluation

As a way of bringing together the different themes and activities of the day, the workshop groups split and reformed into mixed groups to review and evaluate their activities. Facilitators were given the following guidelines:

Purpose:

- To reflect on and review participants experiences of systems thinking in action;
- To reflect on participants own implicit systems thinking skills;
- To enable participants to learn from each other about what went on in all workshops (these Groups are reformed to comprise participants from across all workshops).
- To explore how what they have experienced might be relevant in their own context (or what would be needed to do so);
- To articulate and record future learning needs which might be supported by SPMC.

You have 45 minutes for this whole session and need to have your group back for a final farewell/closure session of 5 minutes by 5pm sharp.

All participants will have been pre-allocated to a group for this session with the room number/facilitator indicated.

Please check out at the start of your session who will be taking notes of the discussion as part of their normal practice. If some volunteer ask if they would mind writing up their notes and sending them to you for forwarding to Jacqueline and for incorporation in the workshop proceedings. (If you have no volunteers ask for two people who might be able to prepare some notes to accompany the diagrammes).

Suggested format:

1. You could start by agreeing the purpose and establishing a contract for the session (5 minutes maximum);
2. You might invite individuals to use one of the systems techniques or tools they learned in their workshop to structure their reflection. My suggestion (because time is short) is that you suggest a Systems Map and proceed in the manner described below unless there are strong alternative views.
 - List all the elements that they want to incorporate in their system of interest;
 - A suggested starting point could be to build a systems map of 'my workshop experience';
 - Or it could be related to purpose as in 'a system to experience systems thinking in action'.
3. An alternative rather than individuals doing this alone could be to form sub-groups comprising those people who attended the same workshop with the purpose of generating a common Systems Map (or exploring how they experienced it differently).
4. Whether done individually or in pairs allow only 15 minutes for this (to be done on sheets of A4 paper and stuck on the wall when completed).
5. Then take it in turns to explore each other's Systems Maps (you have 20 minutes left for this). Try to draw out for the recorders the main points during this session – perhaps using a flip chart.
6. Final comments prior to returning to the farewell plenary (5 minutes).

Facilitator responsibilities

1. Ensure everyone has equal airtime;
2. Encourage participants to use, where appropriate, systems concepts they have developed during the day;
3. Ensure Systems Maps are written legibly or in a way that they can be understood by a reader (these will be collected and published);
4. Ensure all Maps are collected and handed to Jacqueline Eisenstadt (with participants names on them);

5. Ensure that in all maps participants address what SPMC might be able to assist them with next? And what they may have to offer SPMC.

Feedback group notes:

Evaluation group FS

The group felt that they had gained some systems knowledge and in most instances had been given the opportunity, in the practitioner's workshops, to use the systems tools that the practitioner had used in their own consultancy. The group said that the practitioner seminars had given them new insights into Systems Practice. The setting had provided them with the opportunity to interact and discuss questions about the use of Systems ideas.

This group commented upon the wealth of experience that had been brought into the practitioner groups by the participants themselves. They felt that the total experience had enriched the session. One member of the group said that he would use the experience within his own teaching.

Another comment was that there was a perceptible shift from individuals towards a community.

Appreciation was expressed about the openness of the workshop.

The consensus was that the expectations of the group had been met.

GROUP MAP



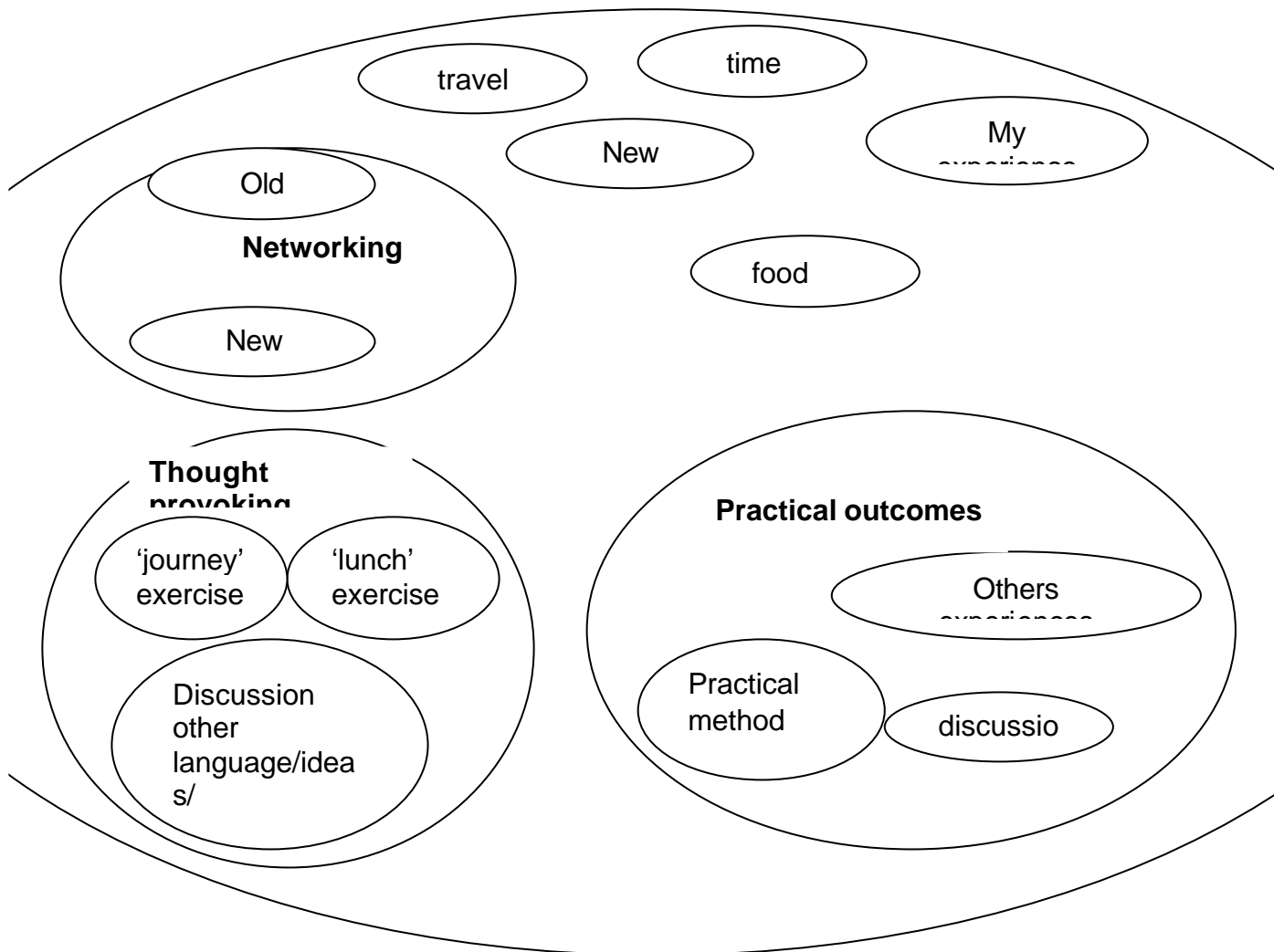
Evaluation group MH

This group worked by drawing systems maps or rich pictures of their individual experiences of the day. It had been an enjoyable day for the group, providing useful learning to take away. Specific issues included

- The indicators supplementing CATWOE, for sustainability (and their practical applications to LUNCH) which I understood Dr Rowe [? Bell] thought were transferable to the situations he was working with
- In the workshop on organised crime and the formal systems model, the idea of designing systemic interventions for failure and the focus on the decision maker

Evaluation group RI

A Systems Map of the SPMC Workshop



Evaluation group DC

Evaluation group MR

Miscellaneous other feedback

“ A lovely day..... I really did enjoy it. It was very thought provoking and resulted in me seeing all sorts of connections in my own work.” - W.F.

“ A big thank you to everyone involved in organising the Systems day...I really enjoyed it and found Patrick’s workshop on the NHS very helpful and informative. ...I am sure that if it were possible to organise more events along these very practical lines there would be a greater take up from the non-academci types like me who could then take the principles out into the wider world.” BC

“I thoroughly enjoyed it and learned a lot. Organised crime group proved to be particularly fascinating.” KC

“ Thanks for the opportunity to meet some interesting people.” GM

"the sessions with Sue Holwell were thoroughly enjoyable. To be exposed to this calibre of lecturer was wonderful" – RA.

“One of the strengths of the day was the sectioning off of the ideas for systems study but I was disappointed to find when I arrived that each subject had its own systems method attached.” – RA.