

Peter Checkland

Systems Thinking has been described as trans-disciplinary and is associated with a well established academic and practitioner community. It arose out of necessity. As society has become increasingly connected and the interactions between peoples have increased, traditional ways of operating have no longer sufficed. Through no clearly discernible reasons, projects overran budgets, communications systems between people broke down, and it became increasingly obvious that the human factor was playing a large role in these problems. Many of the early systems thinking methodologies did not model people as part of the equation – they were what is now described as systematic rather than systemic.

One of the first people to recognise this was Peter Checkland, who subsequently became known as the creator of "soft systems methodology", a once radical approach to management problem solving which is now used and taught world-wide. Checkland, originally from Birmingham, studied chemistry at Oxford in the 1950's and worked as a technologist and then a manager for ICI fibres. But when he made the move from research to management he found that little existed in the way of training and preparation for his new role.

Peter Checkland: *When I became a manager I found it mysterious, that transition. I thought, "I need to know how to do this job." Management education was in a very rudimentary state at that time. ICI would send you on a 3 day course on discounted cash flow modelling and odd things like that but that was all. You learned to be a manager by making mistakes, watching other people and following them and so on.*

I thought that the problem of managing a project which by definition would normally be a purposeful action which will cut across organisational boundaries was a very interesting problem both of a human and an intellectual kind. And what I sought was the opportunity to reflect and garner the lessons from real world experiences. And a post graduate department of systems engineering at Lancaster beckoned and seemed to offer an opportunity to do that.

Checkland became aware of systems thinking and systems analysis through his project management work at ICI.

When he made the move to Lancaster University, he set up an action research project to work outside the university tackling business problems. But one of these projects was bigger than he had anticipated.

Peter Checkland: *We made progress by making mistakes and finding that the systems engineering thinking that we were armed with intellectually was not rich enough to cope with the problematical situations that we were trying to deal with. And an early dramatic example for me was when we were invited by David Farrow who was a director of the British Aircraft Corporation which was the British part of the Anglo-French concorde project to go into that project and see what good advice we could offer from a systems engineering viewpoint.*

Everyone knew at the time that this project was years late and was costing millions more of taxpayers money than anticipated, so it was a very problematical situation and think-

ing like systems engineers, we asked, systems engineering questions: What is the System of Concern? The Concorde Project. What are its objectives? To make the world's first supersonic passenger carrying jet aircraft within a certain time, at a certain cost, to meet a given technical specification and under various constraints such as that it mustn't unacceptably pollute the environment and it must get the airworthiness certificate, otherwise the public won't be allowed to fly in it. But of course we then quickly discovered the significance of the fact that this was the "Anglo-French" concorde project. You had to take it as a political and a legal and an economic project as well as a technical engineering project. And that was the kind of experience that led me to think there is something "not rich enough" in the thinking of systems engineering as we tried to apply that approach to human management situations. And that initiated the rethink.

His experience as a consultant on the concorde project made Checkland realise that the project was more than a technical enterprise. With humans involved, any project takes on social and cultural dimensions.

He realised that he needed to rethink the way in which projects were managed, and his solution involved looking at the effects of systemic thinking within managed projects. 'Systems Thinking, Systems Practice', his ground-breaking book published in 1981 elucidates the principles of SSM – Soft Systems Methodology. It was a significant step away from conventional wisdom.

Peter Checkland: *I went back to the origins of the systems literature and the emergence of Systems Thinking fundamentally from biology and from the organismic biologists who argued that the object of concern in biology was the living organism as a whole and the way to understand that was to look at the processes which characterise living organisms of any kind. And that was a set of ideas which began to resonate with the kind of experiences that we were having.*

The fundamental idea that got us going was the thought that whether we were working in the giant corporation on the concorde project or in a tiny small firm; whether we were in the public sector or the private sector; all of these human problem situations do have one thing in common: That they contain human beings trying to work together and trying to operate purposefully. Trying to formulate intentions and then trying to realise them. And we thought well, why don't we take the notion of a "purposeful activity" as a new systems concept. And when human beings talk about "purposeful activity" they give very rich interpretations of it. They never give a basic account of it, they interpret it richly. We then realised the significance of the fact that one observer's terrorist is another observer's freedom fighter though they're both talking about the same purposeful action. And that we would have to take this into account, that we would never be making a purposeful activity model of a real world purposeful activity, we would have to make a whole set of models in order to try them out against the purposeful action that was underway in the real world.

The example to which I always refer to on that because it brings it home easily, it's a dramatic example – came from a project which we undertook one year for the Home Office, which was concerned with examining what kind of information systems you need to manage a prison. And if you start to think, well, what is a prison? It's obvious that if you ask people, "What is a prison?" Then the person who says "it's a punishment system" will be countered by someone who says "no it isn't it's a rehabilitation or a re-education system" and another person thinking laterally may well say "no no, it's a system to protect society", looking at it from the other way around. And the point is that there is no answer

to the question "What is a prison?" Any actual real world prison is a complex changing mix of all of these perceptions.

And so we ended up with the structure of what is now known as "soft systems methodology", in which we will entertain all of those different models and use them in a process in which we will rub the models up against the perceived reality and in that comparison learn our way to what are the actions which this particular group of people, with their particular history, in their particular situation could take to make things better in their eyes. And that entailed another major piece of learning from me, which is to understand that in structuring a debate with those people in the problem situation, using those "purposeful activity" models, what we were looking for in that debate were the accommodations between conflicting points of view which enable action to be taken.

So this takes the view that conflict deriving from different world views is endemic in human affairs but that these systems ideas based on the concept of a "purposeful activity" system as a device for structuring debate, can lead you into a learning process for finding the accommodations which enable action to be taken to improve things. And that is the fundamental nature of the learning cycle which is SSM.

It was the realisation that individuals see the same concept from multiple perspectives that led Checkland to understand the complexity of perceived reality. But it also led him to understand that accommodating conflicting perspectives was a way to work towards improving the problem/situation through purposeful action. Yet the acceptance of a "soft" systems approach to problem solving does not necessarily mean that "hard" systems approaches are no longer of value to the systemic thinker.

Peter Checkland: *Our experience in developing "soft" systems methodology is that the world is highly complex and mysterious, and far more complex than any of our ways of notating it. And the best stance is to say "well the world is highly problematical, goodness knows what the world really consists of – but – we have said from our work the way of enquiring into it, the way of learning about it, the way of deciding how to take action to improve it, can itself be organised as a system." And what I'm talking about here is the fundamental distinction between "hard" and "soft" systems thinking. The "hard" systems thinker takes system as in everyday language to be a label word for complexity in the world. The "soft" systems thinker is perfectly happy to make a conscious use of the "hard" systems ideas. Within a given study we will frequently say, "we will choose to take this bit of the world as if it were a system, but we know we are consciously making that choice for our temporary purposes in that particular situation." The fundamental stance is that the world is mysterious and complex but that the way of enquiring into it, engaging with it can itself be organised as a learning system. So that the "systemicity" is in the process of enquiry, not taken to exist in the world.*

And the "soft" systems stance is the one that has shifted "systemicity" from the world to that process of enquiry into the world, and that is a hard step for people to take. Particularly because every day, in everyday language we use the word system as if it were a description of some part of complexity in the world.

Soft System methodology is very very broadly relevant not I think simply because of megalomania on my part, but because of the ubiquity of human beings trying to act purposefully. So that I would say that in principle – SSM – or Soft Systems Thinking approach is in principle relevant to any human situation in which people are trying to take purposeful action. Now that rules out interesting areas of human life which are not

purposeful. For example: falling in love. And in that sense, if you see anyone acting purposefully in the world you can do an analysis of what ideas must they be taking as given if they think that is a sensible action. So that the ideas lead to the action. But in the end that action is the only source of the ideas, so there is a continual cycle between the ideas and the action. And it is that cycle which is the concern of our research. And it is that constant interaction with the real world that is the driving force.

The cyclic relationship between purposeful action and the understanding of the ideas that are acted on is fundamental to Checkland's SSM. When asked to look back upon his experiences of its introduction, Checkland identifies four key ideas.

Peter Checkland: *The first one was to model purposeful activity. Because that was a characteristic of all of the problem situations, would be purposeful activity. The second one was that we could only model purposeful activity in relation to declared perspectives or world views. The third was that given that inevitably that we ended up with this cyclic learning process using the models as devices to structure debate, not as descriptions. The fourth was then that our activity models which are sets of activities linked together in an adaptive whole to be purposeful led us into work on information systems. And we've done a whole two decades of work in information systems because we can turn our activity models into information models.*