Third draft - 1 June 2011

Theoretical Underpinnings of Symbolic Modelling

Document history

In 2006 Judy Rees asked James Lawley for a summary of the theories behind the practice of Symbolic Modelling. Judy wrote up the discussion into a paper (First draft, 20 April 2006) which they subsequently revised (Second draft, 4 May 2008). James has extensively revised and updated this version (Third draft, 1 June 2011).

Judy's second draft can be found at:
www.cleanchange.co.uk/cleanlanguage/2008/08/09/theoretical-underpinnings-of-symbolic-modelling/

Introduction

Symbolic Modelling is a practical methodology for facilitating change, and for modelling expertise. Like many other recent innovations it tends to tell its success stories through anecdotes and case studies. However it is informed by, and consistent with, various well-established theoretical perspectives. This document aims to make explicit the links with these bodies of knowledge, and suggests directions for further reading. We hope it will clarify where Symbolic Modelling fits in and perhaps inspire fresh thinking and debate. It is not intended to be exhaustive – Symbolic Modelling is a relatively new field, and is in the process of forming links with the work of academic communities around the world.

Symbolic Modelling was developed by James Lawley and Penny Tompkins from the work of David Grove. For a full description of it, see their book, *Metaphors in Mind* (2000).

Summary

The following areas of study have been among those with the greatest influence on Symbolic Modelling:

1. Experiential Constructivism (as a core philosophy)
2. Cognitive Linguistics (the academic study of metaphor, cognition and language)
3. Self-organising systems theory (as a model of human cognition and other complex networks)
4. Evolutionary dynamics (as a model of emergent phenomena and the change process)
5. A developmental perspective (as an across-time perspective)
6. Modelling (as the principal methodology of practice)

The remainder of this document takes each of these in turn, offers a basic definition and suggests further reading.

1. Experiential Constructivism (as a core philosophy)

> From birth we create mental models of how the world works. These inform our decisions, guide our behaviour and enable us to learn and change. Later, in an attempt to understand and explain the processes by which we give meaning to the world, we also construct models of our models. This gives us a degree of freedom, a semblance of choice, because it allows us to recognise that our models are just that—*our maps*, and not *the territory*—and are therefore subject to revision, modification and improvement.1 With this awareness it becomes possible to *change the way we construct* our models, thereby opening up new ways of perceiving the world and our place in it. (*Metaphors in Mind, p. 21)*

The constructivist way of thinking is summed up by Alfred Korzybski's famous remark in *Science and Sanity*, "The map is not the territory". Or, in full:

> The map is not the territory; the map doesn't cover all of the territory; and the map is self-reflexive (it becomes part of the territory).

Like Neuro-Linguistic Programming (NLP), Symbolic Modelling accepts that each of us creates our own experience of reality, which may have little relation to any external world 'out there' in space-time. In some ways, each of us, all the time, is making it up as we go along! However we are constrained by our biological and psychological experiences. Mark Johnson says in *The Body in the Mind*:

> Our reality is shaped by the patterns of our bodily movement, the contours of our spatial and temporal orientation, and the forms of our interactions with objects. (p. xix)

Fritjof Capra, *The Web of Life*, says something similar in a slightly different way:

> Cognition is not a representation of an independently existing world, but rather a continual bringing forth a world through the process of living. (p. 260)

These kind of perspectives have result in the explosive growth in recent years the field of Embodied Cognition.

Suggested reading (for a more extensive list of see: 'Constructivism is only a Construct': cleanlanguage.co.uk/articles/articles/187/)

- Bandler, Richard & Grinder, John, *Structure of Magic I*, Science and Behaviour Books, 1975
- Bandler, Richard, *Using Your Brain for a Change*, Real People Press, 1985
- Capra, Fritjof, *The Web of Life*, Harper Collins, 1996
- Dennett, Daniel C, *Consciousness Explained*, Penguin Books, i993
- Johnson, Mark, *The Body in the Mind*, University of Chicago Press, 1987
- Korzybski, Alfred, *Science and Sanity an Introduction to Non-Aristotelian Systems and General Semantics*, International Society for General Semantics, 1933
- Mahoney, Michael J., What is Constructivism and Why is it Growing?, *Contemporary Psychcology*, 49, 360-363. awidyarso65.files.wordpress.com/2008/08/constructivism-theory.pdf
- Maturana, Humberto & Varela, Francesco, *The Tree of Knowledge*, Shambala, 1992
- Robertson, Ian, *Mind Sculpture*, Bantam Press, 1999
- Lakoff, George and Mark Johnson, *Philosophy in the Flesh,* Basic Books, 1999
- Varela, Francisco, et al., *The Embodied Mind,* The MIT Press, 1992
- Watzlawick, Paul (editor), *The Invented Reality*, W W Norton, 1984 and *Munchhausen's Pigtail*, W W Norton, 1990

2. Cognitive Linguistics (the academic study of metaphor, cognition and language)

> Metaphorical expressions… have a coherent and consistent organisation because there is a coherent and consistent organisation to cognition. Many cognitive scientists now conclude that people not only talk in metaphor, but also think and reason in metaphor, they make sense of their world through metaphor, and they act in ways that are consistent with their metaphors… Thus the organisation of a client's language and behaviour will be isomorphic with the organisation of their cognitive processes, and both will be grounded in the embodied nature of experience. (*Metaphors in Mind, p. 18)*

Cognitive Linguistics brings together aspects of two academic fields – cognitive science and linguistics – to examine the influence of language on cognition, and of cognition on language. Much of the field rests on the research that metaphor plays a primary role in language, cognition and behaviour. And, of course, metaphor takes centre stage in Symbolic Modelling.

It is vital to realise that metaphor is not an occasional foray into the world of figurative language, but fundamental to everyday cognition. This is unlikely to be what you were taught at school about metaphor. Zoltan Kovecses has compared the traditional and new Cognitive Linguistic views of metaphor:

TRADITIONAL VIEW	COGNITIVE LINGUISTIC VIEW
Metaphor is a property of words; it is a linguistic phenomenon.	Metaphor is a property of concepts and not of words.
Metaphor is used for some artistic and rhetorical purpose.	The function of metaphor is to better understand certain concepts.
Metaphor is based on a resemblance or similarity between two entities that are compared and identified.	Metaphor is based on a set of correspondences or mappings between constituent elements.
Metaphor is a conscious and deliberate use of words and you must have a special talent to do it well.	Metaphor is used effortlessly in everyday life by ordinary people.
Metaphor is a figure of speech that we can do without; we use it for special effects.	Metaphor is an inevitable process of human thought and reasoning.

Suggested reading:

- Evans, Vyvyan & Green, Melanie *Cognitive Linguistics: An Introduction,* Edinburgh University Press, 2006.
- Fauconnier, Gilles & Turner, Mark, *The Way We Think: Conceptual blending and the mind's hidden complexities*, Basic Books, 2002
- Geary, James, *I Is An Other: The Secret of Metaphor and How It Shapes the Way We See the World*, Harper Collins, 2011.
- Kovecses, Zoltan, *Metaphor: A practical introduction*, Oxford University Press, 2002
- Lakoff, George and Johnson, Mark, *Metaphors We Live By*, University of Chicago Press, 1980 (with new afterword, 2003)
- Lakoff, George, *Women, Fire and Dangerous Things*, University of Chicago Press, 1987
- Lindstromberg, Seth, *English Prepositions Explained*, 1998.
- Pinker, Stephen, *The Stuff of Thought*, Allan Lane, 2007

3. Self-organising system theory (as a model of human cognition and other complex networks)

> People can be regarded as self-organising systems – and so can their Metaphor Landscapes. (*Metaphors in Mind*, p. 29)

Peter Senge gives this definition of systems thinking in *The Fifth Discipline*:

> You can only understand the system of a rainstorm by contemplating the whole, not any individual part of the pattern. Business and other human endeavours are also systems. They too, are bound by invisible fabrics of interrelated actions, which often take years to fully play out their effects on each other. Since we are part of that lacework ourselves, it's doubly hard to see the whole pattern of change. Instead, we tend to focus on snapshots of isolated parts of the system, and wonder why our deepest problems never get solved. Systems thinking is a conceptual framework, a body of knowledge and tools that have been developed over the past fifty years, to make the patterns clearer, and to help us see how to change them more effectively. (p. 6)

O'Connor and McDermott offer:

> Systems thinking looks at the whole, and the parts, and the connections between the parts, studying the whole in order to understand the parts. It is the opposite of reductionism, the idea that something is simply the sum of its parts. (p. 2)

Although 'systems thinking' is being used more and more to model human cognition, groups and other complex networks, the aim, as John McWhirter points out, is to "think systemically". Traditional models featuring linear cause-effect relationships fail to capture the fascinating complexity of cognition and networks. Life's more interesting than that!

Suggested reading:

- *Barabasi,* Albert-Laszlo, *Linked*: *How everything is connected,* Plume, 2003
- Bateson, Gregory, *Mind and Nature,* Bantam, 1979; and with Mary Catherine Bateson, *Angels Fear,* Bantam, 1988.
- Buchanan, Mark, *Nexus: Small worlds and the science of networks,* Norton, 2002
- Capra, Fritjof, *The Web of Life*, Harper Collins 1996
- Christakis, Nicholas & Fowler, James, *Connected*, HarperPress, 2011
- Kosko, Bart*, Fuzzy Thinking*, Flamingo, 1994
- O'Connor, Joseph & McDermott, Ian, *The Art of Systems Thinking*, Thorsons, 1997
- Senge, Peter M, *The Fifth Discipline*, Doubleday, 1990
- Strogatz, Steven Sync: *Rhythms of nature, rhythms of ourselves,* Allen Lane, 2003
- Ward, Mark, *Beyond Chaos: The underlying theory behind life, the universe and everything,* Thomas Dunne Books, 2002
- Watts, Duncan, *Six Degrees: The Science of a connected age*, Norton, 2003

4. Evolutionary dynamics (as a model of emergent phenomena and the change process)

> In response to a universe in constant flux, living systems are forever adapting, learning and evolving —that is, changing in an effort to preserve and maintain their coherence and identity. Homeostatic, self-perpetuating processes make changes at one level in order to maintain stability at other levels. The result is a constantly changing state of dynamic stability—ably demonstrated by a tightrope walker. (*Metaphors in Mind,* p. 36)

Evolutionary dynamics, as a field, is concerned with the processes of adaptation, development and evolution. (This has included applying mathematics and computer science to the study of biological evolution. For example you can enjoy a 1970 experiment, the Game of Life, at: en.wikipedia.org/wiki/Conway's_Game_of_Life)

Evolutionary dynamics assumes that order emerges spontaneously out of chaos and is 'selected' for its 'survival value'. Once self-organisation starts, its primary function is to maintain itself and doing that requires continually adapting to changing circumstances, both external and internal.

In *Metaphors in Mind* six characteristics of systemic change are identified and mapped onto the way Metaphor Landscapes, and thus people, change and evolve:

> Change manifests as a difference of form over time.
>
> Change is specified by the existing organisation of the system.
>
> Living systems are always changing – just to the stay the same.
>
> Change occurs naturally when suitable conditions arise.
>
> There are two ways systems evolve – translation and transformation.
>
> The effect of change is indeterminate.

Suggested reading:

- Corning, Peter, *Nature's Magic*, Cambridge University Press, 2003
- Donald, Merlin, *A Mind So Rare*, W. W. Norton, 2001
- Gladwell, Malcolm, *The Tipping Point: How little things can make a big difference,* Back Bay Books, 2002
- Goodwin, Brian, *How The Leopard Changed Its Spots*, Phoenix, 1997
- Gould, Stephen Jay, *The Structure of Evolutionary Theory*, The Belknap Press of Harvard University Press, 2002
- Johnson, Steven, *Emergence: The connected lives of ants, brains, cities and software,* Scribner, 2002
- Taleb, Nassim Nicholas*The Black Swan: The Impact of the Highly Improbable*, Allen Lane, 2007 (second edition, Penguin, 2010)
- Wilber, Ken, *Sex, Ecology, Spirituality,* Shambala, 1995

5. A developmental perspective (as an across-time perspective)

> When appropriate conditions emerge, or as Buddhists say, 'arise', transformation occurs spontaneously. All you and your client can do is to work with what happens in such a way as to *encourage* conditions for transformation. This would be a random process were it not for the developmental, progressive nature of Nature, whose directionality is often represented by an arrow—an arrow that does not travel in a straight line, but one that spirals and meanders as it progresses. (*Metaphors in Mind,* p. 176)

The Penguin Dictionary of Psychology (1995) defines development in four ways:

1. The sequence of changes over the full life span of an organism.
2. Biological maturation (goes back to the old French meaning to unwrap or unfold).
3. An irreversible sequence of change.
4. A progressive change leading to higher levels of differentiation and organisation. Here the connotation is one of positive progress, increases in effectiveness of function, maturity, sophistication, richness and complexity.

The 'thing' that 'develops' may be almost anything: molecular systems, bones and organs, emotions, ideas and cognitive processes, moral systems, personality, relationships, groups, societies and cultures. However, in Symbolic Modelling 'developmental perspective' mainly refers to definition 4.

The four definitions have a common feature, they require a *sequence of changes*. Development involves a number of changes occurring over a relatively long period of time (compared to the time it takes for any single change to occur). You cannot observe human development directly. It requires observing a series of changes. This puts development at a level above a straightforward change process and below the level of evolution

From this perspective the client is like a newborn baby – it's in his nature to learn, grow and develop. He or she will attempt new behaviours and in these attempts will find more new things to attempt. This process is driven by what Lawley and Tompkins call "trial and feedback" loops.

One consequence of this perspective is an expectation that the client's desired outcome is likely to change as the client self-models.

By taking a developmental perspective, Symbolic Modelling expects the general process of change to follow a more-or-less predictable sequence in which each step transcends and includes previous steps, but forming a unique pathway for each individual.

Suggested reading:

- Wilber, Ken, *Integral Psychology,* Shambala, 2000
- Wilber, Ken, *A Brief History of Everything*, Shambala, 1996
- Wilber, Ken*, Sex, Ecology, Spirituality,* Shambala, 1995

And Tompkins and Lawley, 'A Developmental Perspective': cleanlanguage.co.uk/articles/articles/206/

6. Modelling (as the principal methodology)

> Modelling is a process whereby an observer, the modeller, gathers information about the activity of a system with the aim of constructing a generalised description (a model) of how that system works. The model can then be used by the modeller and others to inform decisions and actions. The purpose of modelling is to identify 'what is' and *how* 'what is' works – without influencing what is being modelled. The modeller begins with an open mind, a blank sheet, and an outcome to discover the way a system functions – without attempting to change it. (*Metaphors in Mind,* p. 22)

Stephen Pinker uses the analogy of the modelling process by comparing it to 'reverse-engineering' how a new product works (*How The Mind Works*, 1999).

Lawley and Tompkins say Symbolic Modelling differs from traditional modelling in three ways:

- What is modelled – the organisation of a Metaphor Landscape
- Who is modelling – both the client and the facilitator
- How self-modelling is facilitated – by using Clean Language.

The origins of NLP lie in a series of modelling projects carried out by Richard Bandler and John Grinder. Grinder and Bostic St Clair give their description of the process in *Whispering in the Wind*. In a similar fashion Symbolic Modelling was itself the outcome of Lawley and Tompkins' modelling project of David Grove.

Most NLP books describe the *results* of modelling projects, not the modelling process itself. For example, the first five (pre-NLP) books by John Grinder & Richard Bandler (and others) were the product of their modelling. You have to read between the lines to infer how they did the modelling.

Suggested reading about the process of modelling:

- Dilts, Robert, *Modelling with NLP,* Meta Publications, 1998
- Grinder, John & Bostic St Clair, Carmen, *Whispering in the Wind*, Grinder and St Clair, 2002
- Gordon, David & Dawes, Graham, *Expanding you World: Modeling the Structure of Experience,* Gordon and Dawes, 2005.

And by Lawley and Tompkins:

- 'Introducing Modelling to Organisations': cleanlanguage.co.uk/articles/articles/120/
- 'What is Therapeutic Modelling?': cleanlanguage.co.uk/articles/articles/121/
- 'How to do a Modelling Project': cleanlanguage.co.uk/articles/articles/122/
- 'Modelling Top-down and Bottom-up': cleanlanguage.co.uk/articles/articles/240/
- 'Modelling Robert Dilts Modelling', cleanlanguage.co.uk/articles/articles/266/

Conclusion

The premise that underpins Symbolic Modelling can be summed up as:

> The *organisation* of a client's language and behaviour will be isomorphic with the *organisation* of their cognitive processes, and both will be grounded in the embodied nature of experience. This is why changes in a Metaphor Landscape reflect changes in cognition which in turn generate new thoughts, feelings and behaviour. (*Metaphors in Mind,* p. 19)