

How stories affect human action in organisations



(Picture: Neysa's Advanced Dungeon & Dragon's page <http://24.95.199.67/neysa/add.html>)

By: Frank Smits (<mailto:frank.smits@lineone.net>)

November 2001

University of Western Sydney
Social Ecology, Faculty of Social Inquiry
Complexity, Chaos and Creativity

1 Introduction

Human organisations can be seen as complex systems or complex processes. In the language of Maturana and Varela (1992: 193-6) they are 'third order unities'. They are coupled with the environment and this coupling they also call 'social coupling'. Behaviour in these socially coupled systems is co-ordinated by means of communication (Smits, 2000a).

Stacey (2001b) offsets the complex adaptive systems view to the complex responsive processes of relating. His argument is that interacting humans don't 'adapt' but merely 'respond' to each other's gestures and responses in a continuous process of turn taking. Hence, according to Stacey, we need to look at organisations not as systems but as complex processes of relating via responding to each other.

The latter happens in the form of conversations. Hence 'organising *is* communicating'. It is impossible to reify organisations as 'things'. They are processes.

There are many ways of communicating but both Maturana and Varela and Stacey clearly mention the linguistic nature of human culture. Language, and ways of sharing language and linguistic 'images' therefore is a key component.

'Stories' have therefore played a significant role in the cultural development of humanity. By 'being involved in interpreting the meaning of stories, learning from them, creating and re-creating our own stories, exploring new knowledge or (...) entertaining the information which the stories convey' that gives is the capacity to learn and think (Dimitrov, 2001).

In this paper I will explore how narratives (anything that represents a story) affect human action. And particularly I will explore how this happens in business (and similar) organisations. The distinction between business organisations and other social systems is important. Often, people in business organisations are suppressed from their natural self-organising behaviour. Although in all human organisations there are clear power relationships, in business organisations these are very often much more prevalent.

In order to look at those, I will start to frame stories in the context of human organisations. I will draw upon the very recent thinking from Ralph Stacey who talks about human 'organisations' as reflections of 'complex responsive processes' rather than as 'complex adaptive systems'. I will also work with the work from Richard Knowles and his theories for human action.

Combined we might be able to see how groups of people achieve a common purpose or 'intention' and how the use of stories can affect this intention and hence the emerging action in the group.

If we know the relationship between the use of narratives and the emerging action, we may be able to understand how people and organisations learn and make sense of the world they operate in. It will help us to understand why some business organisations seem to behave in coherent ways and others don't.

This learning we can apply to helping business organisations act more coherently.

2 Stories and organisations

Business organisations use semiotics to make sense of the complex business environment (Smits, 2000a). Storytelling is a process to use various signs and symbols in the context required. It is those signs and symbols that show the organisation as is it. An organisation's identity is reflected in those signs and symbols whilst at the same time those signs and symbols form the identity. They are complicitly linked.

Humans experience reality in the body-mind complex that very essentially includes our emotions and feelings (Damasio, 1994: 245-252). It is even impossible to talk about consciousness without explicitly including emotions and feelings in the whole ('the body-minded brain', Damasio, 1994: 222-244).

The human mind has the capacity to generate stories about reality because of the capacity of the body-mind as a whole to experience this reality (Dimitrov, 2001) with all the senses, emotions and feelings.

'Stories can be defined as a perceptual activity that organises data into patterns which try to represent and explain human experience' (Branagan quoted in Dimitrov, 2001). Most of the activities in business organisations require that people make sense of the complex experiences due the overload of information. Experience is a way to pattern this information. Stories, therefore, act as an 'aide' for sense making.

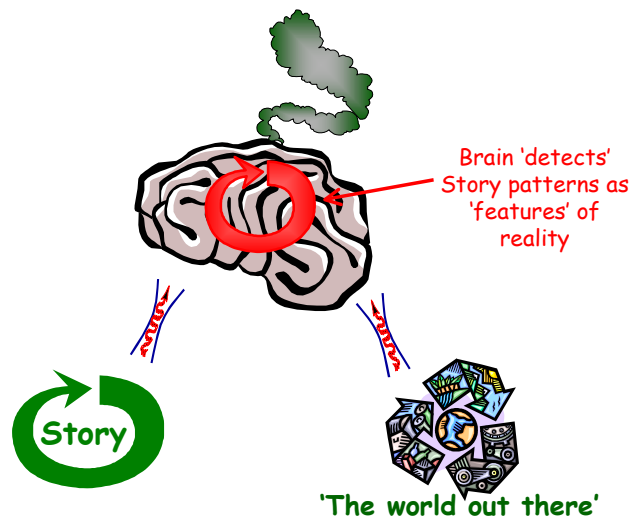


Figure 1 - Brain detects Stories...

Interestingly, the human mind has evolved as a 'feature detection device' (Cohen & Stewart, 1997: 165-181). These 'features' are complicit manifestations of our senses and our environment (Smits, 2000b). Narratives, in the translation of anything that can represent a story and that can stimulate all senses, that seem to link in with our mind's 'features' will be perceived as reflecting 'reality'. They may still be fantasies, but the sequence of events

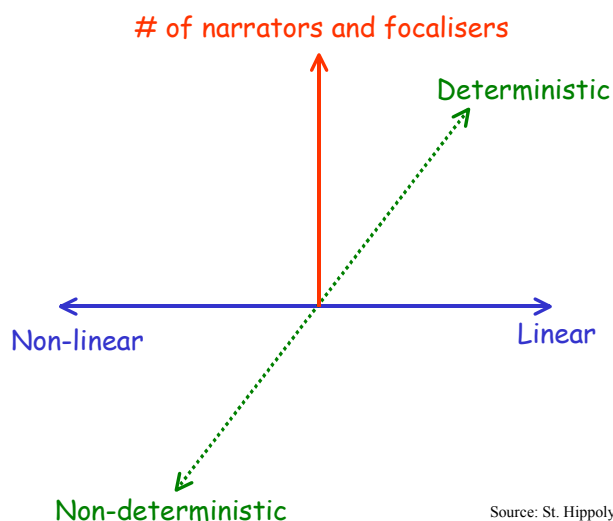
must follow the patterns that our brain manages to 'detect'. If the story does not meet that requirement, it fails to act as a 'sign' in the semiotics point of view (Figure 1). If it does meet that requirement ('resonance', see paragraph 4 below) it becomes a powerful force for sense making.

Note, though, that stories -in whatever form- are only always partial description of reality (Dimitrov, 2001 and Stacey, 2001: 139).

This leaves the danger of people in positions of relative power to impose their interpretation of the story on other people in the organisation. Since this interpretation, when in resonance with the listener, is an essential part of the sense making process the interpretation will be heavily influenced by the 'power relationships'. If the narrator uses tools to influence these all sensory experiences we may get to the point where the listener may not be able to see the story as only a story.

Moreover, by consciously applying subtle techniques we can influence people's experiences *deliberately*. One such model comes from the world of Neuro Linguistic Programming (NLP) and is called the 'Milton Model'. By using deletions, distortions and generalisations in language we are able to tap into certain *verifiable* neuro-physiological experiences in people and via that lead them into experiencing *unverifiable* feelings and emotions. The verifiable elements of the story bring people in what can be referred to as a 'trance' necessary to be open for the latter generally referred to as 'hypnosis' (O'Connor & McDermott, 1996:116-125).

Taken this as potential way to segregate the story-experience from reality makes that people, powerful storytellers, can make people 'captives' of the story (Dimitrov, 2001). Both consciously and unconsciously these practices happen all the time, since they are inherent in human language. Human language, as we have seen already, can never be a completely accurate description of reality.



Source: St. Hippolyte, 1998

Figure 2 - Forces Propelling a Story

In order to determine what forces can actually propel a story, I will use the following model (St. Hippolyte, 1998) derived originally for digital storytelling (i.e. computer adventure games). See Figure 2.

In this model there are three dimensions to a taxonomy of storytelling

- ✓ Degree of non-linearity. How much power does the narrator(s) grant the listener? The more linear a story is the less influence the listener has on the plot.
- ✓ Degree of determinism. This has not to do with who has the power, but how much storytelling power there is. The more non-deterministic a story is, the more unpredictable ('fuzzy') the plot
- ✓ The number of narrators and focalisers. How fragmented is the story? This introduces another form of unpredictability ('fuzziness') than the one above. The more narrators there are the less coherent the story will be. The more focalisers there are the more incoherent the story as well.

Examples of a linear-deterministic story with a single author are factual descriptions of happenings, for instance on the course of an accident in an accident report. Both the narrator and the listener have no power in the process to influence the plot.

An example of a non-linear, non-deterministic story with multiple authors, for instance, is the improvising group on stage reacting to suggestions by the audience (multiple authors!).

In organisations this 'story-space' might be occupied differently dependent on the history of the organisation, the power-relationships, etc. This can be seen as a phase space where these forces can form (multi-dimensional) strange attractors for certain people interacting! The attractor might be seen as part of the dynamic identity of the group (see Smits, 2001a on group identity).

Given this, we can analyse in some form or another what the power of the listener and the narrator is in the stories that are told. In the Milton model for instance the way of telling stories is *deliberately* linear, non-deterministic and by one narrator.

The implication for organisations is that the way people make sense of the complex dynamics surrounding them is influenced to a great extent by the stories, conscious and unconscious, that circulate and are being told and retold. Arguably, these describe the true identity of that organisation as it continually unfolds. Organising is narrative-like (see also, Stacey 2001a: 139).

3 Stories and Human Action

Organisations, in fact the 'organising via relating' (Fraser, 2001), exist in order to 'do something'. Hence somehow, the individuals in the organisation need to 'act'. Knowles (2001) describes that if our identity is clear and we are actively interconnected in interdependent processes that when information comes available, action can emerge. The information sharing happens in interactive processes between individuals (either inside or outside the 'organisation').

Stacey (2001, 138-9) points out that the interactive communication between people forms narrative-like sequences of which the order is internal to the story itself! I understand this to mean that narratives *are* the ongoing process of communicative 'negotiation' between people 'in the living present'. 'Experience' is narrative-like in its formation and patterning in the living present and can be recounted in stories, but by definition (see above) only in part. If we consider those stories as 'wholes' and being created in the living present in the interaction between people somehow the story is being propelled in the narrative force space introduced in paragraph 2 above. Or, the story's order resides somewhere on the strange attractor in the narrative's phase space.

Stacey (2001a, 183) argues that when there is diversity of participation in the conversations that happen in organisation, there is the potential for the organisational identity to be 'threatened'. In the language of Gover (1996) 'our identities are being constitutes and reconstituted with their physical, cultural and historical contexts'. The roots of narratives and identity, he claims, 'merge, inextricably embedded and nurtured in the soil of human action'.

But this is complicity! Stories and identity are being formed by human action ('experience' in Stacey's words) and at the same time form human action.

If we realise that action emerges from self-organisation as pointed out by Knowles (2001 and Smits 2001b) and that the self-organisation 'domains' can be seen as the dynamic 'triangle' Identity, Relationships and Information (as developed by Wheatley, see Smits 2001b) we can somehow see stories as an 'energiser' for action to emerge from self-organisation (see Figure 3).

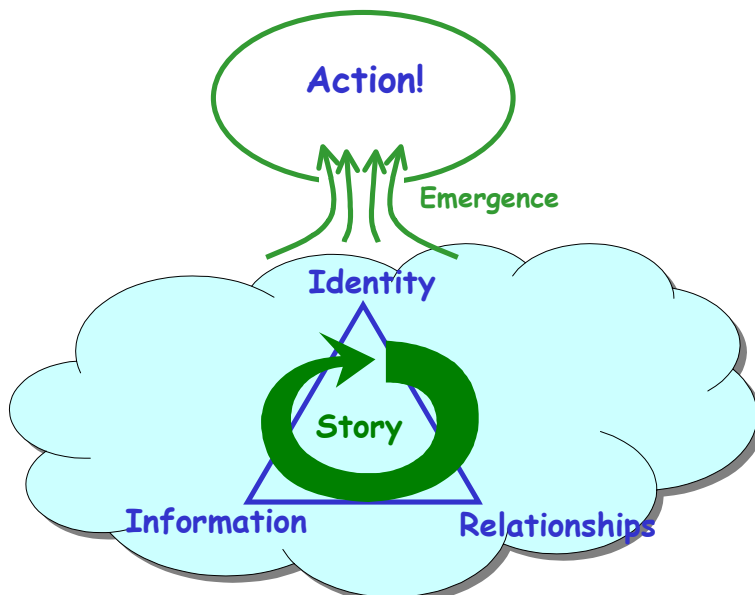


Figure 3 - Self-organisation, Storytelling and Action

Reflecting on this model shows the importance of how stories are being told (where in the narrative force space are they) and how they are being focalised.
How can stories help to create coherence in the actions of people in organisations, and how can they create incoherence?

4 Resonance and Coherence

Narratives, thus, have a profound effect on the action that people take. Narratives can invoke emotional and physiological effects in the human body-brain-soul complex. This is a complex behaviour and can be metaphorically described as a vortex. The vortex of the narrative in the context of the storyteller, focaliser and listener.

The theory of vortex formation states that forces of significant magnitude can emerge when the 'vorticity' reaches a certain level. 'Vorticity' is a characteristic of the whirling energy of all that participates in the formation of the vortex; it is the variety in the dynamics of the process of the vortex (Dimitrov, 2001).

In the model, presented in paragraph 3 above, the vortex is represented by the green arrow that is the story-telling process.

The 'participants' in the formation of a vortex are the swarm of ideas, feelings, emotions, responses, gestures, etc. All these are highly interactive and interdependent. If the story as a swarm maintains its integrity, in other words if it moves on the attractor identified in paragraph 2 above, then it will display the vortical motion.

If the vorticity of this motion reaches a certain level then the energy produced by the vortex can create a self-organising force towards action. The question, as also posed by Dimitrov (2001), is how this action can be sustained?

All people have certain activities they prefer to be involved in. These are the activities that move our individual ideas, feelings, emotions, responses and gestures in such a way that they energise the emergence (self-propelling) of 'meaning' ('enjoyment and inspiration' in the words of Dimitrov (2001), but see also Knowles, 2001). Dimitrov (2001) calls these activities 'essential' in our lives.

If the magnitude and direction of the vortex of the story resonates with the magnitude and direction of the vortex emerging from our essential activities, then these two vortices fall into resonance with each other. That is, they become coherent, implying that 'meaning' can be sustained for a long time' in the individual. This is an application of the Law of Resonant Vorticity (Dimitrov, 2001).

If the narratives, seen as vortices, resonate with an individual's experience then the emergent action becomes meaningful and can therefore be sustained.

So, what is the implication for action and intention as emerging in organisations, as groups of interacting individuals?

If we treat organisations as complex responsive processes (Stacey, 182-3) we treat organising as communication. Meaning that the act of organising is the same as the act of

communicating. Communicating is the processes of gesturing and responding and responding to that response, etc., on conscious, unconscious, formal, informal, legitimate or 'shadow' level (Stacey, 2001a: 172). Since this is a complex phenomenon, this is the complex responsive process Stacey talks about. He also claims that communication happens in narrative-like sequences.

First of all we need to determine what interaction results in 'generative action' (producing something meaningful and novel) in the context of this paper. My definition would be that all that interaction which happens because the participants have a *choice* to interact (i.e. can influence the plot to some 'reasonable' extent! -and 'doing nothing' is interaction) will result in some form of generative action. If there is very limited choice, we are in the situation where the narratives are highly linear and deterministic - we cannot influence the plot. I would argue that in all situations where there is choice, hence there where we move away from the linear-deterministic space in the 'narrative force space' of Figure 2, people are bound by a 'common intention'. Or, the intention is that what we try to achieve together, consciously and unconsciously. This intention 'emerges' in the living present. The choice to interact, hence to influence the plot of the narrative, is made based on how 'common' this emergent intention is. And this intention is dynamic, because it is continuously being constructed in the relating between the people (Smits & Tobin, 2001). So, all interaction that happens in the context of a continuously unfolding common intention results in action.

Secondly, when is this action meaningful and therefore sustainable? We have to define when the common intention is *compelling* enough for the individuals' interaction. I would argue that when the magnitude and direction of the vortex of the narrative is in resonance with that of all interacting individuals the 'powerful forces' get unleashed that allow meaning to emerge.

Thirdly, if meaning emerges, the sense that people make from the stories that are being told is coherent with the intention of the people interacting because it is an integral part of the *identity* of those people (see also paragraph 2 above).

Lets reflect on this.

Meaning emerges when the vorticity of the narrative resonates with the vorticity of the essential activities of all people interacting, consciously AND unconsciously. This means that there is a common identity and deep intention in the group ('Group Intention').

This being the case the action that will then emerge is meaningful to *all* in the group and therefore implicitly sustainable for a long period of time. In fact, it means that there are no outsiders in this group, since everyone is 'at risk' with the emergent intention as long as the resonant vorticity sustains. We will discuss that in more detail in paragraph 5.

So, in summary (see Figure 4):

Coherent action is the result of the interacting between individuals happening in narrative-like sequences whose vortices fall into resonance with the essential activities between the individuals.

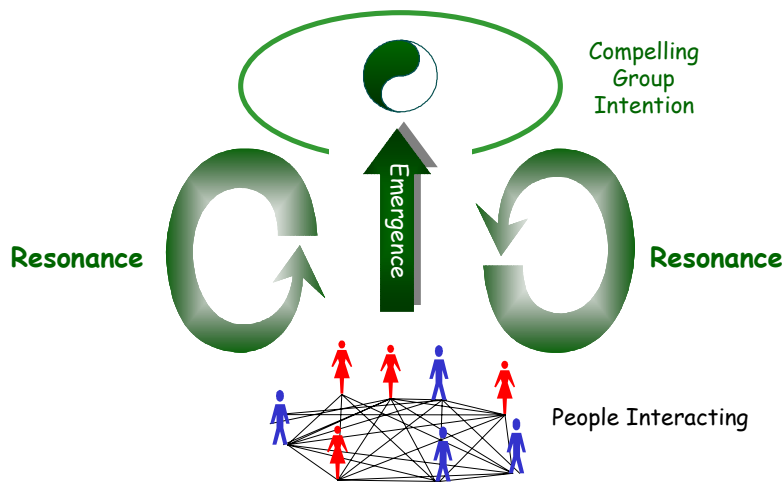


Figure 4 - Resonance and Compelling Group Intention

Now let's look at what happens in many business organisations.

Usually, little attention is paid to people's essential activities and what drives them to those activities. Let's call this driver the Individual Intention. If people in organisations don't pay attention to the Individual Intention, the likelihood of the vortices of the narratives in those organisations resonating with the vortex of the Individual Intention is purely one of chance. It is due to individuals themselves to actively spend the time to understand other people's Individual Intention.

It is hardly surprising that in most business organisations, with their apparent power structures, the actions that are being undertaken are essentially incoherent and seem not to support some form of global objective.

Moreover, most efforts from individuals to work towards understanding Individual Intentions from others in the organisations are seen as 'wasting time' or 'being ineffective'. The analysis above demonstrates clearly that quite the opposite is true if we accept that organisations consist of people interacting, via narratives that happen in the narrative force space from Figure 2.

Hence, people in organisations have a choice to accept that the strange attractor in narrative force space is leading to incoherence or to actively work on understanding the Individual Intention and transcend to an attractor that will energise coherent action.

5 Individual and Group Intention

Which bring us to the next part of this exploration.

How can we reconcile Individual and Group Intention?

In paragraph 4 above we described that the Group Intention is dynamic and happening 'in the living present'. That may be true but that is hardly a way to create a sustainable group

of people that can work together to create effective and meaningful action for a longer period of time. The main issue of course is that people in business organisations are very often required to work together, whether or not there is autonomous potential for resonance between the vortices of their Individual Intention.

Then we fall in the trap described at the end of paragraph 4 above.

I believe the answer may be that by 'fuzzifying' the interacting gestures and responses in the group we may be able to create a Group Intention that can be qualified as 'for the common good' (words from Fraser, 2001). In practice this means that in Figure 2 we move up the vertical axis. We realise that we introduce fuzziness via allowing multiple narrators and focalisers in the ongoing narratives. Interpreting Zadeh's Principle of Incompatability (Dimitrov, 2000):

As the complexity of a complex responsive process of relating increases, human ability to create precise meaningful narratives about that relating diminishes until the point that precision (meaning) and relevance (intention) become mutually exclusive characteristics.

But this is where only fuzzy stories are the only bearers of meaning! It therefore is the fuzziness in the emergent Group Intention that allows meaning and therefore sustainable action to emerge.

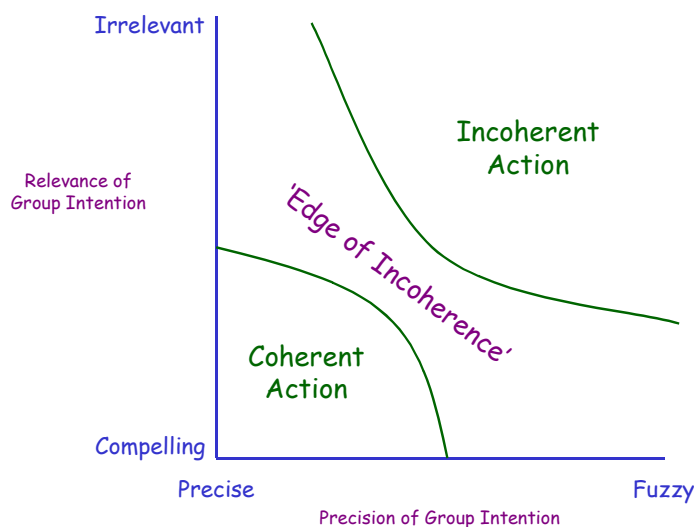


Figure 5 - Group Intention

The critical point in the interaction to deliver this sustainable action therefore is the point at which the fuzzy Group Intention is still compelling enough for people to (consciously and unconsciously) participate in the process and 'want' to influence the plot of the unfolding story ('Edge of Incoherence', mirroring the metaphor of the 'Edge of Chaos').

Looking at Figure 5 it is easy to see that with people interacting we will be somewhere in this space of Group Intention. The 'Coherent Action' space is there where the vorticity of the narrative is in resonance with the vorticity of the Individual Intentions of the people

interacting. When more and more people participate in this interacting this group resonance will disappear and the resulting action will become incoherent. For most interactions in most organisations the Group Intention will emerge in this chaotic, incoherent, space.

By consciously working on understanding Individual Intention and consciously work on fuzzifying the narrative ('moving in the narrative force space of Figure 2) the complex responsive process of interaction between the people will move to the attractor at the critical point. This can only happen in self-organised process of interactions where meaning can start to flow. That is the domain of dialogue; it is the art of 'thinking together' (Isaacs, 199: 27-29). Or, in the words of Bohm:

From time to time (the) tribe (gathered) in a circle. They just talked and talked and talked, apparently to no purpose. They made no decisions. There was no leader. (...) The meeting went on until finally it seemed to stop for no reason at all and the group dispersed. Yet, after that, everybody seemed to know what to do (...). Then they could get together in smaller groups and do something or decide things.

David Bohm, *On Dialogue* (quoted in Jaworski, 1998: 109)

In this quote Bohm describes how dialogue as a way of people interacting manages to let meaning emerge because of people understanding each other's Individual Intentions. Effective action could emerge. Note that the course of action was not *decided* by someone outside the process or decided via a compromise! It was emergent because the process allowed the Group Intention to move to the Edge of Incoherence.

In narrative terms, if the process of relating is in narrative-like sequences we describe a process where the role of narrator and focaliser is continuously moving between individuals in the group.

6 Implications for Facilitating Coherent Action

Above we have identified that in order for coherent and effective action to emerge from people interacting we need a process for narrating in organisations that includes understanding of each Individual Intention by all people in the group. This has significant consequences for the way conversations happen in organisations.

Firstly, people interacting in organisations need to understand that relating happens in the form of narratives on a strange attractor somewhere in the narrative force space. People in organisations make sense via these narratives. The 'shape' and 'position' of the attractor is key in the way people make sense and the effectiveness and coherence of the emergent action.

Once we realise that we can start a process of making use of stories and processes of storytelling that meets the purpose of coherent and effective action. The dialogue process, as suggested in paragraph 5 above, can be seen as a way to continuously build and rebuild stories with multiple and varying narrators and focalisers that

will naturally move to the point where coherent action can emerge that meets the Individual Intentions of all the actors.

There is the requirement, put forward in paragraph 5, that during the conversation the statements (sequences of gestures and responses) must be 'fuzzified' in order to get to the critical point of a Group Intention 'in the living present'. Issue, of course, as pointed out by Stacey (2001a: 148-151) is that in all relating there is the issue of power. The power relationship makes that certain 'contributions' to the story will be much less prone to fuzzification and therefore they will inhibit the emergence of the Group Intention. 'Power enables one to do what one could not otherwise do and it also constrains one from doing what one might autonomously like to do' (Stacey, 2001a: 150).

Key to this 'power relating' is that the people that are part of this complex process for which there is this requirement of the emergent Group Intention are all somehow 'at risk' with the effects of the emergent action (Smits, 2001b).

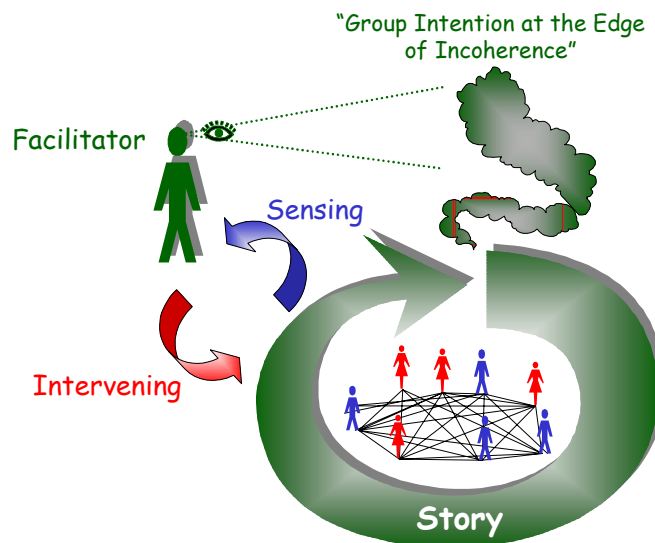


Figure 6 - Paradoxical Role of Facilitator

This is why external facilitation in those groups can truly help to achieve this fuzzification. External facilitation means just 'somehow external to that what the group formally aims to achieve'.

The continuous emergence of the Group Intention is a process. By helping people 'see' that power relating (for instance) exists people can choose (sic!) to start to change their behaviours as a response to the interventions (gestures) of the Facilitator. Since the Facilitator is not at risk with the emergent action, he/she can much easier 'suspend' opinion as required for effective dialogue.

But, in order for Facilitators to participate, as a listener, a 'neutral' narrator or focaliser, they need to be able to understand the language, power relationships, semiotics, etc. in the group of people. In other words, they need to be 'external insiders'. As the name suggests

this is a very paradoxical role (see Figure 6). By somehow becoming an 'insider' there is potentially an element of 'risk' for the Facilitator with the outcome (emergent action). A delicate balance.

The Facilitator needs to be able to 'sense' the group, but also act as the 'breaker' in the conversations at the same time.

He/she needs to be able to identify and recognise the language, alterations and voice effects in the narratives that actually help the process of emergence of the Group Intention to the 'Edge of Incoherence': the point of maximum 'inclusiveness' with the Group Intention.

When 'abused', language, alterations and voice effect can inhibit the autonomy of people's contributions to the story, or even the emergent roles of narrator and focaliser. See the example of trance and hypnosis in paragraph 2.

The language used in a group is cultural (see paragraph 1 above). The Facilitator therefore cannot come into a group dialogue 'cold'. Trust between the Facilitator and the group is essential and use of language that creates a form of 'belonging' is key. The Facilitator needs to spend 'sensing time' with the group prior to any formal participation.

'Alterations' are shifts in modes of presentation of stories that do not conform to the expectations associated by the group in the current conversation (narrative). The Facilitator can recognise those only if he/she is able to 'sense' the group by being 'sufficiently' part of the linguistic space (culture). Then, the Facilitator can intervene and help the group see what is happening.

Bakhtin (1981, from Dimitrov, 2001) suggests several basic voice effects that can characterise narratives (monologism, dialogism, heteroglossia and alterity). Each of those presents ways potential ways to influence power relationships and the emergence of the Group Intention.

Thus, with recognising the potential patterns of narrating, the process of generating a 'novel' story that will allow coherent action to emerge, the Facilitator has the possibility of 'helping the process of emergence' of a Group Intention at the Edge of Incoherence forward.

This may require helping to 'fuzzify' statements and helping to see what prevents the dialogue from being effective. By continuously keeping an eye on the emerging Group Intention.

Therefore he or she must be an 'external insider'.

7 Conclusion

We set out to explore how people in business organisations make sense of the complexity of the social reality. In particular we explored the role of storytelling in that process.

By treating 'organising as relating' and hence seeing organisations as complex responsive processes narratives *are* in fact the way organising happens.

Narratives are the way that people make sense of the complex reality and are in fact the way people organise.

Because this is the case, the way stories unfold in organisations is how action emerges. This action can be coherent or incoherent. The coherence of the actions depends on how the stories are actually propelled. The coherence depends on the strange attractors that emerge in the 'narrative forces space'.

In other words:

Conducting business (action) is the process of organising via the continuous unfolding of a story of experiences that is being told and retold in business organisations.
The story is being created in the living present.

If the dynamics of narratives are in resonance with the dynamics of the intention of the individuals participating in the narratives, as a whole, the actions will be coherent and effective. If either consciously or unconsciously the dynamics are not in resonance or have emerged non-autonomously for certain participants the emerging action will be more incoherent and ineffective. If meaning emerges for all participants from the process of narration coherent action will emerge.

I suggest that by paying continuous attention to people's individual essential activities in the context of the subject at hand a 'common intention' can emerge at what I called 'The Edge of Incoherence'. 'Dynamic balancing' between coherence and incoherence. The group intention is sufficiently fuzzified to still be meaningful and include the participants in the group. From this intention coherent action can emerge.

By using facilitators, true dialogue may happen that allows meaning to flow and the group identity to emerge. For this facilitator to be successful he or she needs to balance between being an 'outsider' and an 'insider' at the same time. The facilitator needs to be an 'external insider', close enough to the group to understand it, far enough from the group to not be at risk with the fuzzified group intention and the emergent action.

There is a space for people in most organisations to take on this role. It will be a co-evolutionary role within and outside the organisation. Group Intention knows no boundaries.

Another example from 'living on the Edge'.

References

- Cohen, J. and Stewart, I. (1997). *Figments of Reality*. Cambridge: Cambridge University Press
- Damasio, A. (1996). *Descartes' error*. London: Papermac.
- Dimitrov, V. (2000). *Social Fuzziology*, University of Western Sydney, <http://www.uws.edu.au/vip/dimitrov/fuzziology.htm>
- Dimitrov, V. (2001) - *Use of Narratology in Dealing with Social Complexity*, University of Western Sydney, <http://www.uws.edu.au/vip/dimitrov/narratology.htm>
- Fraser, S. (2001), *Adapting for the better: the individual's perspective on organisations*, Paper presented to Forum on Quality in Healthcare (Royal Society of Medicine). London: November 7.

- Gover, M (1996). *The narrative emergence of Identity*, Paper presented at the Fifth International Conference on Narrative. Lexington, Kentucky, October 18-20, <http://www.msu.edu/user/govermar/narrate.htm>
- Isaacs, W. (1999). *Dialogue and the art of thinking together*. New York: Currency
- Jaworski, J. (1998). *Synchronicity, the inner path of leadership*. San Francisco: Berrett-Koehler
- Knowles, R. N. (2001). *Meaning, Trust and Action: some thoughts on the importance of Identity, Relationships and Information*, paper presented to 'Practice(s) of Meaning' workshop in Utrecht, Netherlands, 23-26 September, 2001
- Maturana, H. and Varela, F. (Rev.Ed., 1992). *The Tree of Knowledge*. Boston, Mass.: Shambala Press
- O'Connor, J. and McDermott, I. (1996). *Principles of NLP*, London: Thorsons
- Smits, F. (2000a). *Virtual Semiotic Analysis of Business Change*. UWS-H Masters Programme (SE840a), website: <http://website.lineone.net/~frank.smits/Essays/Virtual-Semiotic-Analysis.htm>
- Smits, F. (2000b). *Consumerism as a Social Complicit Fungible Memeplex*. UWS-H Masters Programme (SE841a), website: <http://website.lineone.net/~frank.smits/Essays/Consumerism-Memeplex.htm>
- Smits, F. (2001a), *Complex Management: Identity and Change in organisations as Living Systems*, UWS-H Masters Program (SE843a). <http://website.lineone.net/~frank.smits/Essays/Complex-Management.htm#>
- Smits, F. (2001b), *Analysis of 'good growth' in Sphinx Ltd.*, UWS-H Masters Program (SE846a).
- Smits, F. and Tobin, J. (2001); *Simple Rules*, dialogue on the List Serve list from the Plexus Institute (<http://www.plexusinstitute.com/>)
- St. Hippolyte, M. (1998), *Narrative Dynamics*' posting on VRML Literature list; see <http://www.kanga.nu/archives/VRML-Lit-L/1998/msg00258.php>
- Stacey, R. (2001a). *Complex Responsive Processes in Organisations*. London: Routledge
- Stacey, R. (2001b) - *Understanding organisations as Complex Responsive Processes*, Paper presented to Forum on Quality in Healthcare (Royal Society of Medicine). London: November 7